

Bottom Ash Data

2024 Week 52

The following analytical report represents bottom ash composite results for week 52 of 2024 (December 22, 2024 to December 28, 2024).

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

CERTIFICATE OF ANALYSIS

Work Order	: VA25A0122		
Client	: Reworld Renewable Burnaby, ULC	Laboratory	: ALS Environmental - Vancouver
Contact	: Nicole Victor	Account Manager	: Gulraj Dhanaua
Address	: 5150 Riverbend Drive Burnaby British Columbia Canada V3N 4V3	Address	: 8081 Lougheed Highway Burnaby BC Canada V5A 1W9
Telephone	: ----	Telephone	: +1 604 253 4188
Project	: PO#46693 Weekly Bottom Ash-Suite	Date Samples Received	: 03-Jan-2025 12:00
PO	: VANCO0000052919	Date Analysis Commenced	: 03-Jan-2025
C-O-C number	: ----	Issue Date	: 08-Jan-2025 18:56
Sampler	: ----		
Site	: (includes 2:1 pH)		
Quote number	: Covanta Burnaby Standing Offer 2024		
No. of samples received	: 12		
No. of samples analysed	: 12		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Janice Leung	Supervisor - Organics Instrumentation	Organics, Burnaby, British Columbia
Owen Cheng		Metals, Burnaby, British Columbia
Robin Weeks	Team Leader - Metals	Metals, Burnaby, British Columbia
Wingyee Cheng	Analyst- General	Metals, Burnaby, British Columbia



General Comments

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

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

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

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

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

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

<: less than.

>: greater than.

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

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

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



Analytical Results

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

Sub-Matrix: Soil (Matrix: Soil/Solid)					Client sample ID	BA2452-A-1	BA2452-A-2	BA2452-A-3	BA2452-A-4	BA2452-A-5
Client sampling date / time					03-Jan-2025 00:00	03-Jan-2025 00:00	03-Jan-2025 00:00	03-Jan-2025 00:00	03-Jan-2025 00:00	03-Jan-2025 00:00
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0122-001	VA25A0122-002	VA25A0122-003	VA25A0122-004	VA25A0122-005	
					Result	Result	Result	Result	Result	
Physical Tests										
Moisture	----	E144/VA	0.25	%	25.2	24.0	25.1	24.8	24.7	
pH (1:2 soil:water)	----	E108/VA	0.10	pH units	11.5	11.5	11.4	11.3	11.2	
Metals										
Aluminum	7429-90-5	E440/VA	50	mg/kg	40900	33900	52600	36800	41900	
Antimony	7440-36-0	E440/VA	0.10	mg/kg	98.6	88.9	91.0	141	98.6	
Arsenic	7440-38-2	E440/VA	0.10	mg/kg	12.8	12.6	13.0	14.5	13.4	
Barium	7440-39-3	E440/VA	0.50	mg/kg	733	620	600	610	556	
Beryllium	7440-41-7	E440/VA	0.10	mg/kg	0.40	0.34	0.44	0.40	0.37	
Bismuth	7440-69-9	E440/VA	0.20	mg/kg	5.24	4.87	6.56	5.94	5.31	
Boron	7440-42-8	E440/VA	5.0	mg/kg	197	191	241	243	277	
Cadmium	7440-43-9	E440/VA	0.020	mg/kg	5.85	5.73	5.98	5.97	12.1	
Calcium	7440-70-2	E440/VA	50	mg/kg	126000	124000	135000	136000	133000	
Chromium	7440-47-3	E440/VA	0.50	mg/kg	382	226	134	119	247	
Cobalt	7440-48-4	E440/VA	0.10	mg/kg	159	62.7	48.0	44.0	47.3	
Copper	7440-50-8	E440/VA	0.50	mg/kg	1120	4370	1440	3450	6280	
Iron	7439-89-6	E440/VA	50	mg/kg	44300	61300	39100	49800	57700	
Lead	7439-92-1	E440/VA	0.50	mg/kg	1400	316	1280	6030	979	
Lithium	7439-93-2	E440/VA	2.0	mg/kg	38.4	24.2	27.5	34.4	36.0	
Magnesium	7439-95-4	E440/VA	20	mg/kg	12400	12800	13300	12600	13100	
Manganese	7439-96-5	E440/VA	1.0	mg/kg	1020	1310	852	752	807	
Mercury	7439-97-6	E510/VA	0.0500	mg/kg	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	



Analytical Results

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

					Client sample ID	BA2452-A-1	BA2452-A-2	BA2452-A-3	BA2452-A-4	BA2452-A-5
					Client sampling date / time	03-Jan-2025 00:00	03-Jan-2025 00:00	03-Jan-2025 00:00	03-Jan-2025 00:00	03-Jan-2025 00:00
Analyte	CAS Number	Method/Lab	LOR	Unit		VA25A0122-001	VA25A0122-002	VA25A0122-003	VA25A0122-004	VA25A0122-005
						Result	Result	Result	Result	Result
Metals										
Molybdenum	7439-98-7	E440/VA	0.10	mg/kg		24.8	14.8	15.0	17.1	16.5
Nickel	7440-02-0	E440/VA	0.50	mg/kg		237	114	84.5	657	225
Phosphorus	7723-14-0	E440/VA	50	mg/kg		8930	11200	9820	10700	11000
Potassium	7440-09-7	E440/VA	100	mg/kg		4600	4980	5300	4740	5060
Selenium	7782-49-2	E440/VA	0.20	mg/kg		0.24	0.30	0.22	0.29	0.26
Silver	7440-22-4	E440/VA	0.10	mg/kg		3.91	2.93	4.05	2.99	5.11
Sodium	7440-23-5	E440/VA	50	mg/kg		16100	16200	17000	16400	16700
Strontium	7440-24-6	E440/VA	0.50	mg/kg		279	283	287	278	267
Sulfur	7704-34-9	E440/VA	1000	mg/kg		8900	9300	10100	9400	10200
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		98.6	170	482	128	120
Titanium	7440-32-6	E440/VA	1.0	mg/kg		311	174	244	308	280
Tungsten	7440-33-7	E440/VA	0.50	mg/kg		2.70	3.63	2.97	4.56	3.55
Uranium	7440-61-1	E440/VA	0.050	mg/kg		1.75	1.62	1.80	1.68	1.71
Vanadium	7440-62-2	E440/VA	0.20	mg/kg		36.6	36.9	30.5	32.1	31.2
Zinc	7440-66-6	E440/VA	2.0	mg/kg		3180	3300	2660	2710	2940
Zirconium	7440-67-7	E440/VA	1.0	mg/kg		2.4	1.9	3.7	2.2	2.9
TCLP Metals										
pH, TCLP 1st preliminary	----	EPP444/VA	0.010	pH units		11.7	11.7	11.7	11.8	11.8
pH, TCLP 2nd preliminary	----	EPP444/VA	0.010	pH units		5.96	5.98	6.05	5.56	5.47
pH, TCLP extraction fluid initial	----	EPP444/VA	0.010	pH units		2.87	2.87	2.87	2.87	2.87



Analytical Results

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

					Client sample ID	BA2452-A-1	BA2452-A-2	BA2452-A-3	BA2452-A-4	BA2452-A-5
					Client sampling date / time	03-Jan-2025 00:00	03-Jan-2025 00:00	03-Jan-2025 00:00	03-Jan-2025 00:00	03-Jan-2025 00:00
Analyte	CAS Number	Method/Lab	LOR	Unit		VA25A0122-001	VA25A0122-002	VA25A0122-003	VA25A0122-004	VA25A0122-005
						Result	Result	Result	Result	Result
TCLP Metals										
pH, TCLP final	----	EPP444/VA	0.010	pH units		7.01	6.76	6.80	6.69	6.70
Antimony, TCLP	7440-36-0	E444/VA	1.00	mg/L		<1.00	<1.00	<1.00	<1.00	<1.00
Arsenic, TCLP	7440-38-2	E444/VA	1.0	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Barium, TCLP	7440-39-3	E444/VA	2.5	mg/L		<2.5	<2.5	<2.5	<2.5	<2.5
Beryllium, TCLP	7440-41-7	E444/VA	0.025	mg/L		<0.025	<0.025	<0.025	<0.025	<0.025
Boron, TCLP	7440-42-8	E444/VA	0.50	mg/L		2.21	2.13	2.18	2.19	2.15
Cadmium, TCLP	7440-43-9	E444/VA	0.050	mg/L		0.068	<0.050	0.057	0.054	<0.050
Calcium, TCLP	7440-70-2	E444/VA	10	mg/L		1900	1920	1950	1820	1900
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		0.755	1.31	0.744	0.502	1.10
Copper, TCLP	7440-50-8	E444/VA	0.050	mg/L		0.705	0.813	0.853	0.788	0.822
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		104	104	106	104	107
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	0.44	<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	BA2452-A-1	BA2452-A-2	BA2452-A-3	BA2452-A-4	BA2452-A-5
Client sampling date / time						03-Jan-2025 00:00	03-Jan-2025 00:00	03-Jan-2025 00:00	03-Jan-2025 00:00	03-Jan-2025 00:00
Analyte	CAS Number	Method/Lab	LOR	Unit		VA25A0122-001	VA25A0122-002	VA25A0122-003	VA25A0122-004	VA25A0122-005
						Result	Result	Result	Result	Result
TCLP Metals										
Zinc, TCLP	7440-66-6	E444/VA	0.50	mg/L		1.51	7.85	6.58	12.8	11.4
Zirconium, TCLP	7440-67-7	E444/VA	10	mg/L		<10	<10	<10	<10	<10

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

Analytical Results

Sub-Matrix: Soil (Matrix: Soil/Solid)					Client sample ID	BA2452-A-6	BA2452-A-7	BA2452-A-8	BA2452-A-9	BA2452-A-10
Client sampling date / time						03-Jan-2025 00:00	03-Jan-2025 00:00	03-Jan-2025 00:00	03-Jan-2025 00:00	03-Jan-2025 00:00
Analyte	CAS Number	Method/Lab	LOR	Unit		VA25A0122-006	VA25A0122-007	VA25A0122-008	VA25A0122-009	VA25A0122-010
						Result	Result	Result	Result	Result
Physical Tests										
Moisture	----	E144/VA	0.25	%		26.4	25.3	23.2	24.2	24.9
pH (1:2 soil:water)	----	E108/VA	0.10	pH units		11.5	11.4	11.5	11.5	11.5
Metals										
Aluminum	7429-90-5	E440/VA	50	mg/kg		48200	43300	43800	41700	42900
Antimony	7440-36-0	E440/VA	0.10	mg/kg		95.6	122	91.1	83.9	118
Arsenic	7440-38-2	E440/VA	0.10	mg/kg		59.1	14.6	12.5	11.4	13.6
Barium	7440-39-3	E440/VA	0.50	mg/kg		581	633	721	757	604
Beryllium	7440-41-7	E440/VA	0.10	mg/kg		0.40	0.37	0.34	0.43	0.40
Bismuth	7440-69-9	E440/VA	0.20	mg/kg		5.19	4.70	167	4.45	5.20
Boron	7440-42-8	E440/VA	5.0	mg/kg		188	238	285	185	265
Cadmium	7440-43-9	E440/VA	0.020	mg/kg		9.23	5.84	6.19	6.99	63.3
Calcium	7440-70-2	E440/VA	50	mg/kg		132000	135000	132000	136000	133000



Analytical Results

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

					Client sample ID	BA2452-A-6	BA2452-A-7	BA2452-A-8	BA2452-A-9	BA2452-A-10
					Client sampling date / time	03-Jan-2025 00:00	03-Jan-2025 00:00	03-Jan-2025 00:00	03-Jan-2025 00:00	03-Jan-2025 00:00
Analyte	CAS Number	Method/Lab	LOR	Unit		VA25A0122-006	VA25A0122-007	VA25A0122-008	VA25A0122-009	VA25A0122-010
						Result	Result	Result	Result	Result
Metals										
Chromium	7440-47-3	E440/VA	0.50	mg/kg		124	110	121	132	140
Cobalt	7440-48-4	E440/VA	0.10	mg/kg		143	49.5	74.3	447	59.4
Copper	7440-50-8	E440/VA	0.50	mg/kg		1840	3610	2270	2370	1900
Iron	7439-89-6	E440/VA	50	mg/kg		42400	37100	39200	47800	45000
Lead	7439-92-1	E440/VA	0.50	mg/kg		552	426	841	413	493
Lithium	7439-93-2	E440/VA	2.0	mg/kg		35.7	23.9	27.4	45.8	28.2
Magnesium	7439-95-4	E440/VA	20	mg/kg		11800	11500	12300	13500	12000
Manganese	7439-96-5	E440/VA	1.0	mg/kg		786	678	762	766	687
Mercury	7439-97-6	E510/VA	0.0500	mg/kg		<0.0500	<0.0500	0.268	<0.0500	<0.0500
Molybdenum	7439-98-7	E440/VA	0.10	mg/kg		38.6	12.4	13.6	15.3	15.6
Nickel	7440-02-0	E440/VA	0.50	mg/kg		137	89.4	106	154	118
Phosphorus	7723-14-0	E440/VA	50	mg/kg		10200	13600	10300	9650	12500
Potassium	7440-09-7	E440/VA	100	mg/kg		5640	5120	5580	4740	5160
Selenium	7782-49-2	E440/VA	0.20	mg/kg		0.28	0.32	0.30	0.32	0.30
Silver	7440-22-4	E440/VA	0.10	mg/kg		3.24	2.72	4.07	3.45	3.38
Sodium	7440-23-5	E440/VA	50	mg/kg		17300	16900	18100	16800	17600
Strontium	7440-24-6	E440/VA	0.50	mg/kg		278	279	282	267	426
Sulfur	7704-34-9	E440/VA	1000	mg/kg		10800	10000	10000	8800	9600
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		99.8	113	101	112	97.2
Titanium	7440-32-6	E440/VA	1.0	mg/kg		321	216	349	350	239



Analytical Results

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

Sub-Matrix: Soil (Matrix: Soil/Solid)					Client sample ID	BA2452-A-6	BA2452-A-7	BA2452-A-8	BA2452-A-9	BA2452-A-10
Client sampling date / time					03-Jan-2025 00:00	03-Jan-2025 00:00	03-Jan-2025 00:00	03-Jan-2025 00:00	03-Jan-2025 00:00	
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0122-006	VA25A0122-007	VA25A0122-008	VA25A0122-009	VA25A0122-010	
					Result	Result	Result	Result	Result	
Metals										
Tungsten	7440-33-7	E440/VA	0.50	mg/kg	2.63	3.29	3.46	3.57	3.59	
Uranium	7440-61-1	E440/VA	0.050	mg/kg	1.79	1.69	1.86	1.65	1.89	
Vanadium	7440-62-2	E440/VA	0.20	mg/kg	31.3	29.0	30.7	31.2	31.8	
Zinc	7440-66-6	E440/VA	2.0	mg/kg	3090	2660	3160	9090	3250	
Zirconium	7440-67-7	E440/VA	1.0	mg/kg	3.5	1.9	2.1	1.9	2.6	
TCLP Metals										
pH, TCLP 1st preliminary	----	EPP444/VA	0.010	pH units	11.8	11.8	11.8	11.8	11.8	
pH, TCLP 2nd preliminary	----	EPP444/VA	0.010	pH units	5.72	5.64	5.67	5.85	5.77	
pH, TCLP extraction fluid initial	----	EPP444/VA	0.010	pH units	2.87	2.87	2.87	2.87	2.87	
pH, TCLP final	----	EPP444/VA	0.010	pH units	6.58	6.46	6.41	6.38	6.57	
Antimony, TCLP	7440-36-0	E444/VA	1.00	mg/L	<1.00	<1.00	<1.00	<1.00	<1.00	
Arsenic, TCLP	7440-38-2	E444/VA	1.0	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	
Barium, TCLP	7440-39-3	E444/VA	2.5	mg/L	<2.5	<2.5	<2.5	<2.5	<2.5	
Beryllium, TCLP	7440-41-7	E444/VA	0.025	mg/L	<0.025	<0.025	<0.025	<0.025	<0.025	
Boron, TCLP	7440-42-8	E444/VA	0.50	mg/L	2.40	2.28	2.34	2.41	2.42	
Cadmium, TCLP	7440-43-9	E444/VA	0.050	mg/L	0.063	0.084	0.087	0.082	0.076	
Calcium, TCLP	7440-70-2	E444/VA	10	mg/L	2010	1940	2000	2000	2120	
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	1.73	1.45	1.26	1.20	1.15	
Copper, TCLP	7440-50-8	E444/VA	0.050	mg/L	1.06	0.958	1.06	1.12	0.933	
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	BA2452-A-6	BA2452-A-7	BA2452-A-8	BA2452-A-9	BA2452-A-10
Client sampling date / time						03-Jan-2025 00:00	03-Jan-2025 00:00	03-Jan-2025 00:00	03-Jan-2025 00:00	03-Jan-2025 00:00
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0122-006	VA25A0122-007	VA25A0122-008	VA25A0122-009	VA25A0122-010	
					Result	Result	Result	Result	Result	
TCLP Metals										
Lead, TCLP	7439-92-1	E444/VA	0.25	mg/L	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Magnesium, TCLP	7439-95-4	E444/VA	2.5	mg/L	112	107	116	116	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	0.48	0.27	0.37	0.28	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	17.7	21.0	20.1	10.2	
Zirconium, TCLP	7440-67-7	E444/VA	10	mg/L	<10	<10	<10	<10	<10	

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

Analytical Results

Sub-Matrix: Soil (Matrix: Soil/Solid)					Client sample ID	BA2452-A-11	BA2452-A-12	----	----	----
Client sampling date / time						03-Jan-2025 00:00	03-Jan-2025 00:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0122-011	VA25A0122-012	----	----	----	----
					Result	Result	----	----	----	----
Physical Tests										
Moisture	----	E144/VA	0.25	%	25.1	25.3	----	----	----	----
pH (1:2 soil:water)	----	E108/VA	0.10	pH units	11.5	11.4	----	----	----	----



Analytical Results

Sub-Matrix: Soil (Matrix: Soil/Solid)					Client sample ID	BA2452-A-11	BA2452-A-12	----	----	----
					Client sampling date / time	03-Jan-2025 00:00	03-Jan-2025 00:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0122-011	VA25A0122-012	----	----	----	----
					Result	Result	----	----	----	----
Metals										
Aluminum	7429-90-5	E440/VA	50	mg/kg	41500	40200	----	----	----	----
Antimony	7440-36-0	E440/VA	0.10	mg/kg	91.2	82.6	----	----	----	----
Arsenic	7440-38-2	E440/VA	0.10	mg/kg	12.9	11.9	----	----	----	----
Barium	7440-39-3	E440/VA	0.50	mg/kg	592	672	----	----	----	----
Beryllium	7440-41-7	E440/VA	0.10	mg/kg	0.36	0.36	----	----	----	----
Bismuth	7440-69-9	E440/VA	0.20	mg/kg	6.23	5.44	----	----	----	----
Boron	7440-42-8	E440/VA	5.0	mg/kg	221	208	----	----	----	----
Cadmium	7440-43-9	E440/VA	0.020	mg/kg	7.44	6.04	----	----	----	----
Calcium	7440-70-2	E440/VA	50	mg/kg	131000	129000	----	----	----	----
Chromium	7440-47-3	E440/VA	0.50	mg/kg	117	196	----	----	----	----
Cobalt	7440-48-4	E440/VA	0.10	mg/kg	338	42.4	----	----	----	----
Copper	7440-50-8	E440/VA	0.50	mg/kg	2400	2280	----	----	----	----
Iron	7439-89-6	E440/VA	50	mg/kg	47100	52700	----	----	----	----
Lead	7439-92-1	E440/VA	0.50	mg/kg	482	530	----	----	----	----
Lithium	7439-93-2	E440/VA	2.0	mg/kg	42.8	25.0	----	----	----	----
Magnesium	7439-95-4	E440/VA	20	mg/kg	10600	11100	----	----	----	----
Manganese	7439-96-5	E440/VA	1.0	mg/kg	1550	944	----	----	----	----
Mercury	7439-97-6	E510/VA	0.0500	mg/kg	<0.0500	<0.0500	----	----	----	----
Molybdenum	7439-98-7	E440/VA	0.10	mg/kg	20.5	14.2	----	----	----	----
Nickel	7440-02-0	E440/VA	0.50	mg/kg	521	129	----	----	----	----
Phosphorus	7723-14-0	E440/VA	50	mg/kg	8140	11100	----	----	----	----



Analytical Results

Sub-Matrix: Soil (Matrix: Soil/Solid)					Client sample ID	BA2452-A-11	BA2452-A-12	----	----	----
Client sampling date / time					03-Jan-2025 00:00	03-Jan-2025 00:00	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0122-011	VA25A0122-012	----	----	----	----
					Result	Result	----	----	----	----
Metals										
Potassium	7440-09-7	E440/VA	100	mg/kg	4870	4840	----	----	----	----
Selenium	7782-49-2	E440/VA	0.20	mg/kg	0.26	0.32	----	----	----	----
Silver	7440-22-4	E440/VA	0.10	mg/kg	4.23	3.72	----	----	----	----
Sodium	7440-23-5	E440/VA	50	mg/kg	15400	16000	----	----	----	----
Strontium	7440-24-6	E440/VA	0.50	mg/kg	267	369	----	----	----	----
Sulfur	7704-34-9	E440/VA	1000	mg/kg	9700	8900	----	----	----	----
Thallium	7440-28-0	E440/VA	0.050	mg/kg	<0.050	<0.050	----	----	----	----
Tin	7440-31-5	E440/VA	2.0	mg/kg	91.3	159	----	----	----	----
Titanium	7440-32-6	E440/VA	1.0	mg/kg	261	200	----	----	----	----
Tungsten	7440-33-7	E440/VA	0.50	mg/kg	2.88	3.00	----	----	----	----
Uranium	7440-61-1	E440/VA	0.050	mg/kg	1.67	1.75	----	----	----	----
Vanadium	7440-62-2	E440/VA	0.20	mg/kg	28.6	30.7	----	----	----	----
Zinc	7440-66-6	E440/VA	2.0	mg/kg	4080	3400	----	----	----	----
Zirconium	7440-67-7	E440/VA	1.0	mg/kg	2.7	3.5	----	----	----	----
TCLP Metals										
pH, TCLP 1st preliminary	----	EPP444/VA	0.010	pH units	11.8	11.8	----	----	----	----
pH, TCLP 2nd preliminary	----	EPP444/VA	0.010	pH units	5.92	5.92	----	----	----	----
pH, TCLP extraction fluid initial	----	EPP444/VA	0.010	pH units	2.87	2.87	----	----	----	----
pH, TCLP final	----	EPP444/VA	0.010	pH units	6.58	6.51	----	----	----	----
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	BA2452-A-11	BA2452-A-12	----	----	----
Client sampling date / time						03-Jan-2025 00:00	03-Jan-2025 00:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0122-011	VA25A0122-012	----	----	----	----
					Result	Result	----	----	----	----
TCLP Metals										
Barium, TCLP	7440-39-3	E444/VA	2.5	mg/L	<2.5	<2.5	----	----	----	----
Beryllium, TCLP	7440-41-7	E444/VA	0.025	mg/L	<0.025	<0.025	----	----	----	----
Boron, TCLP	7440-42-8	E444/VA	0.50	mg/L	2.34	2.30	----	----	----	----
Cadmium, TCLP	7440-43-9	E444/VA	0.050	mg/L	0.066	0.066	----	----	----	----
Calcium, TCLP	7440-70-2	E444/VA	10	mg/L	1980	1970	----	----	----	----
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	0.895	0.762	----	----	----	----
Copper, TCLP	7440-50-8	E444/VA	0.050	mg/L	0.850	1.04	----	----	----	----
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	115	114	----	----	----	----
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	0.28	<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	9.87	13.7	----	----	----	----
Zirconium, TCLP	7440-67-7	E444/VA	10	mg/L	<10	<10	----	----	----	----

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

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: VA25A0122	Page	: 1 of 15
Client	: Reworld Renewable Burnaby, ULC	Laboratory	: ALS Environmental - Vancouver
Contact	: Nicole Victor	Account Manager	: Gulraj Dhanaua
Address	: 5150 Riverbend Drive Burnaby BC Canada V3N 4V3	Address	: 8081 Lougheed Highway Burnaby, British Columbia Canada V5A 1W9
Telephone	: ----	Telephone	: +1 604 253 4188
Project	: PO#46693 Weekly Bottom Ash-Suite	Date Samples Received	: 03-Jan-2025 12:00
PO	: VANCO0000052919	Issue Date	: 08-Jan-2025 18:56
C-O-C number	: ----		
Sampler	: ----		
Site	: (includes 2:1 pH)		
Quote number	: Covanta Burnaby Standing Offer 2024		
No. of samples received	: 12		
No. of samples analysed	: 12		

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

Key

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

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

DQO: Data Quality Objective.

LOR: Limit of Reporting (detection limit).

RPD: Relative Percent Difference.

Workorder Comments

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

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.



Analysis Holding Time Compliance

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

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

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

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

Matrix: **Soil/Solid**

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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA2452-A-1	E510	03-Jan-2025	04-Jan-2025	28 days	1 days	✓	08-Jan-2025	28 days	4 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA2452-A-10	E510	03-Jan-2025	04-Jan-2025	28 days	1 days	✓	08-Jan-2025	28 days	4 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA2452-A-11	E510	03-Jan-2025	04-Jan-2025	28 days	1 days	✓	08-Jan-2025	28 days	4 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA2452-A-12	E510	03-Jan-2025	04-Jan-2025	28 days	1 days	✓	08-Jan-2025	28 days	4 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA2452-A-2	E510	03-Jan-2025	04-Jan-2025	28 days	1 days	✓	08-Jan-2025	28 days	4 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA2452-A-3	E510	03-Jan-2025	04-Jan-2025	28 days	1 days	✓	08-Jan-2025	28 days	4 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA2452-A-4	E510	03-Jan-2025	04-Jan-2025	28 days	1 days	✓	08-Jan-2025	28 days	4 days	✓



Matrix: Soil/Solid

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

Analyte Group : Analytical Method	Method	Sampling Date	Extraction / Preparation				Analysis			
Container / Client Sample ID(s)			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA2452-A-5	E510	03-Jan-2025	04-Jan-2025	28 days	1 days	✓	08-Jan-2025	28 days	4 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA2452-A-6	E510	03-Jan-2025	04-Jan-2025	28 days	1 days	✓	08-Jan-2025	28 days	4 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA2452-A-7	E510	03-Jan-2025	04-Jan-2025	28 days	1 days	✓	08-Jan-2025	28 days	4 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA2452-A-8	E510	03-Jan-2025	04-Jan-2025	28 days	1 days	✓	08-Jan-2025	28 days	4 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA2452-A-9	E510	03-Jan-2025	04-Jan-2025	28 days	1 days	✓	08-Jan-2025	28 days	4 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
LDPE bag BA2452-A-1	E440	03-Jan-2025	04-Jan-2025	180 days	1 days	✓	08-Jan-2025	180 days	6 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
LDPE bag BA2452-A-10	E440	03-Jan-2025	04-Jan-2025	180 days	1 days	✓	08-Jan-2025	180 days	6 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
LDPE bag BA2452-A-11	E440	03-Jan-2025	04-Jan-2025	180 days	1 days	✓	08-Jan-2025	180 days	6 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
LDPE bag BA2452-A-12	E440	03-Jan-2025	04-Jan-2025	180 days	1 days	✓	08-Jan-2025	180 days	6 days	✓



Matrix: Soil/Solid

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

Analyte Group : Analytical Method	Method	Sampling Date	Extraction / Preparation				Analysis				
Container / Client Sample ID(s)			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Metals : Metals in Soil/Solid by CRC ICPMS											
LDPE bag BA2452-A-2	E440	03-Jan-2025	04-Jan-2025	180 days	1 days	✓	08-Jan-2025	180 days	6 days	✓	
Metals : Metals in Soil/Solid by CRC ICPMS											
LDPE bag BA2452-A-3	E440	03-Jan-2025	04-Jan-2025	180 days	1 days	✓	08-Jan-2025	180 days	6 days	✓	
Metals : Metals in Soil/Solid by CRC ICPMS											
LDPE bag BA2452-A-4	E440	03-Jan-2025	04-Jan-2025	180 days	1 days	✓	08-Jan-2025	180 days	6 days	✓	
Metals : Metals in Soil/Solid by CRC ICPMS											
LDPE bag BA2452-A-5	E440	03-Jan-2025	04-Jan-2025	180 days	1 days	✓	08-Jan-2025	180 days	6 days	✓	
Metals : Metals in Soil/Solid by CRC ICPMS											
LDPE bag BA2452-A-6	E440	03-Jan-2025	04-Jan-2025	180 days	1 days	✓	08-Jan-2025	180 days	6 days	✓	
Metals : Metals in Soil/Solid by CRC ICPMS											
LDPE bag BA2452-A-7	E440	03-Jan-2025	04-Jan-2025	180 days	1 days	✓	08-Jan-2025	180 days	6 days	✓	
Metals : Metals in Soil/Solid by CRC ICPMS											
LDPE bag BA2452-A-8	E440	03-Jan-2025	04-Jan-2025	180 days	1 days	✓	08-Jan-2025	180 days	6 days	✓	
Metals : Metals in Soil/Solid by CRC ICPMS											
LDPE bag BA2452-A-9	E440	03-Jan-2025	04-Jan-2025	180 days	1 days	✓	08-Jan-2025	180 days	6 days	✓	
Physical Tests : Moisture Content by Gravimetry											
LDPE bag BA2452-A-1	E144	03-Jan-2025	----	----	----		03-Jan-2025	----	1 days		



Matrix: Soil/Solid

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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA2452-A-10	E144	03-Jan-2025	----	----	----		03-Jan-2025	----	1 days	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA2452-A-11	E144	03-Jan-2025	----	----	----		03-Jan-2025	----	1 days	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA2452-A-12	E144	03-Jan-2025	----	----	----		03-Jan-2025	----	1 days	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA2452-A-2	E144	03-Jan-2025	----	----	----		03-Jan-2025	----	1 days	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA2452-A-3	E144	03-Jan-2025	----	----	----		03-Jan-2025	----	1 days	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA2452-A-4	E144	03-Jan-2025	----	----	----		03-Jan-2025	----	1 days	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA2452-A-5	E144	03-Jan-2025	----	----	----		03-Jan-2025	----	1 days	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA2452-A-6	E144	03-Jan-2025	----	----	----		03-Jan-2025	----	1 days	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA2452-A-7	E144	03-Jan-2025	----	----	----		03-Jan-2025	----	1 days	



Matrix: Soil/Solid

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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA2452-A-8	E144	03-Jan-2025	----	----	----		03-Jan-2025	----	1 days	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA2452-A-9	E144	03-Jan-2025	----	----	----		03-Jan-2025	----	1 days	
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA2452-A-1	E108	03-Jan-2025	04-Jan-2025	30 days	1 days	✓	04-Jan-2025	30 days	1 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA2452-A-10	E108	03-Jan-2025	04-Jan-2025	30 days	1 days	✓	04-Jan-2025	30 days	1 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA2452-A-11	E108	03-Jan-2025	04-Jan-2025	30 days	1 days	✓	04-Jan-2025	30 days	1 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA2452-A-12	E108	03-Jan-2025	04-Jan-2025	30 days	1 days	✓	04-Jan-2025	30 days	1 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA2452-A-2	E108	03-Jan-2025	04-Jan-2025	30 days	1 days	✓	04-Jan-2025	30 days	1 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA2452-A-3	E108	03-Jan-2025	04-Jan-2025	30 days	1 days	✓	04-Jan-2025	30 days	1 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA2452-A-4	E108	03-Jan-2025	04-Jan-2025	30 days	1 days	✓	04-Jan-2025	30 days	1 days	✓



Matrix: Soil/Solid

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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA2452-A-5	E108	03-Jan-2025	04-Jan-2025	30 days	1 days	✓	04-Jan-2025	30 days	1 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA2452-A-6	E108	03-Jan-2025	04-Jan-2025	30 days	1 days	✓	04-Jan-2025	30 days	1 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA2452-A-7	E108	03-Jan-2025	04-Jan-2025	30 days	1 days	✓	04-Jan-2025	30 days	1 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA2452-A-8	E108	03-Jan-2025	04-Jan-2025	30 days	1 days	✓	04-Jan-2025	30 days	1 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA2452-A-9	E108	03-Jan-2025	04-Jan-2025	30 days	1 days	✓	04-Jan-2025	30 days	1 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA2452-A-1	E512	03-Jan-2025	08-Jan-2025	29 days	5 days	✓	08-Jan-2025	29 days	5 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA2452-A-10	E512	03-Jan-2025	08-Jan-2025	29 days	5 days	✓	08-Jan-2025	29 days	5 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA2452-A-11	E512	03-Jan-2025	08-Jan-2025	29 days	5 days	✓	08-Jan-2025	29 days	5 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA2452-A-12	E512	03-Jan-2025	08-Jan-2025	29 days	5 days	✓	08-Jan-2025	29 days	5 days	✓



Matrix: Soil/Solid

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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA2452-A-2	E512	03-Jan-2025	08-Jan-2025	29 days	5 days	✓	08-Jan-2025	29 days	5 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA2452-A-3	E512	03-Jan-2025	08-Jan-2025	29 days	5 days	✓	08-Jan-2025	29 days	5 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA2452-A-4	E512	03-Jan-2025	08-Jan-2025	29 days	5 days	✓	08-Jan-2025	29 days	5 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA2452-A-5	E512	03-Jan-2025	08-Jan-2025	29 days	5 days	✓	08-Jan-2025	29 days	5 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA2452-A-6	E512	03-Jan-2025	08-Jan-2025	29 days	5 days	✓	08-Jan-2025	29 days	5 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA2452-A-7	E512	03-Jan-2025	08-Jan-2025	29 days	5 days	✓	08-Jan-2025	29 days	5 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA2452-A-8	E512	03-Jan-2025	08-Jan-2025	29 days	5 days	✓	08-Jan-2025	29 days	5 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA2452-A-9	E512	03-Jan-2025	08-Jan-2025	29 days	5 days	✓	08-Jan-2025	29 days	5 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA2452-A-1	E444	03-Jan-2025	08-Jan-2025	181 days	6 days	✓	08-Jan-2025	181 days	6 days	✓



Matrix: Soil/Solid

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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA2452-A-10	E444	03-Jan-2025	08-Jan-2025	181 days	6 days	✓	08-Jan-2025	181 days	6 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA2452-A-11	E444	03-Jan-2025	08-Jan-2025	181 days	6 days	✓	08-Jan-2025	181 days	6 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA2452-A-12	E444	03-Jan-2025	08-Jan-2025	181 days	6 days	✓	08-Jan-2025	181 days	6 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA2452-A-2	E444	03-Jan-2025	08-Jan-2025	181 days	6 days	✓	08-Jan-2025	181 days	6 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA2452-A-3	E444	03-Jan-2025	08-Jan-2025	181 days	6 days	✓	08-Jan-2025	181 days	6 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA2452-A-4	E444	03-Jan-2025	08-Jan-2025	181 days	6 days	✓	08-Jan-2025	181 days	6 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA2452-A-5	E444	03-Jan-2025	08-Jan-2025	181 days	6 days	✓	08-Jan-2025	181 days	6 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA2452-A-6	E444	03-Jan-2025	08-Jan-2025	181 days	6 days	✓	08-Jan-2025	181 days	6 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA2452-A-7	E444	03-Jan-2025	08-Jan-2025	181 days	6 days	✓	08-Jan-2025	181 days	6 days	✓



Matrix: Soil/Solid

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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA2452-A-8	E444	03-Jan-2025	08-Jan-2025	181 days	6 days	✓	08-Jan-2025	181 days	6 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA2452-A-9	E444	03-Jan-2025	08-Jan-2025	181 days	6 days	✓	08-Jan-2025	181 days	6 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA2452-A-1	EPP444	03-Jan-2025	03-Jan-2025	----	----		----	28 days	1 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA2452-A-10	EPP444	03-Jan-2025	03-Jan-2025	----	----		----	28 days	1 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA2452-A-11	EPP444	03-Jan-2025	03-Jan-2025	----	----		----	28 days	1 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA2452-A-12	EPP444	03-Jan-2025	03-Jan-2025	----	----		----	28 days	1 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA2452-A-2	EPP444	03-Jan-2025	03-Jan-2025	----	----		----	28 days	1 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA2452-A-3	EPP444	03-Jan-2025	03-Jan-2025	----	----		----	28 days	1 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA2452-A-4	EPP444	03-Jan-2025	03-Jan-2025	----	----		----	28 days	1 days	✓



Matrix: Soil/Solid

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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA2452-A-5	EPP444	03-Jan-2025	03-Jan-2025	----	----		----	28 days	1 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA2452-A-6	EPP444	03-Jan-2025	03-Jan-2025	----	----		----	28 days	1 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA2452-A-7	EPP444	03-Jan-2025	03-Jan-2025	----	----		----	28 days	1 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA2452-A-8	EPP444	03-Jan-2025	03-Jan-2025	----	----		----	28 days	1 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA2452-A-9	EPP444	03-Jan-2025	03-Jan-2025	----	----		----	28 days	1 days	✓

Legend & Qualifier Definitions

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



Quality Control Parameter Frequency Compliance

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

Matrix: **Soil/Solid**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Laboratory Duplicates (DUP)							
Mercury by CVAAS (TCLP)	E512	1832713	1	12	8.3	5.0	✓
Mercury in Soil/Solid by CVAAS	E510	1829334	1	14	7.1	5.0	✓
Metals by CRC ICPMS (TCLP)	E444	1832714	1	12	8.3	5.0	✓
Metals in Soil/Solid by CRC ICPMS	E440	1829333	1	14	7.1	5.0	✓
Moisture Content by Gravimetry	E144	1829338	1	14	7.1	5.0	✓
pH by Meter (1:2 Soil:Water Extraction)	E108	1829335	1	14	7.1	5.0	✓
Laboratory Control Samples (LCS)							
Mercury in Soil/Solid by CVAAS	E510	1829334	2	14	14.2	10.0	✓
Metals in Soil/Solid by CRC ICPMS	E440	1829333	2	14	14.2	10.0	✓
Moisture Content by Gravimetry	E144	1829338	1	14	7.1	5.0	✓
pH by Meter (1:2 Soil:Water Extraction)	E108	1829335	1	14	7.1	5.0	✓
Method Blanks (MB)							
Mercury by CVAAS (TCLP)	E512	1832713	1	12	8.3	5.0	✓
Mercury in Soil/Solid by CVAAS	E510	1829334	1	14	7.1	5.0	✓
Metals by CRC ICPMS (TCLP)	E444	1832714	1	12	8.3	5.0	✓
Metals in Soil/Solid by CRC ICPMS	E440	1829333	1	14	7.1	5.0	✓
Moisture Content by Gravimetry	E144	1829338	1	14	7.1	5.0	✓
Matrix Spikes (MS)							
Mercury by CVAAS (TCLP)	E512	1832713	1	12	8.3	5.0	✓
Metals by CRC ICPMS (TCLP)	E444	1832714	1	12	8.3	5.0	✓



Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

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

Page : 15 of 15
 Work Order : VA25A0122
 Client : Reworld Renewable Burnaby, ULC
 Project : PO#46693 Weekly Bottom Ash-Suite



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

QUALITY CONTROL REPORT

Work Order	: VA25A0122	Page	: 1 of 11
Client	: Reworld Renewable Burnaby, ULC	Laboratory	: ALS Environmental - Vancouver
Contact	: Nicole Victor	Account Manager	: Gulraj Dhanaua
Address	: 5150 Riverbend Drive Burnaby BC Canada V3N 4V3	Address	: 8081 Lougheed Highway Burnaby, British Columbia Canada V5A 1W9
Telephone	: ----	Telephone	: +1 604 253 4188
Project	: PO#46693 Weekly Bottom Ash-Suite	Date Samples Received	: 03-Jan-2025 12:00
PO	: VANCO0000052919	Date Analysis Commenced	: 03-Jan-2025
C-O-C number	: ----	Issue Date	: 08-Jan-2025 18:56
Sampler	: ----		
Site	: (includes 2:1 pH)		
Quote number	: Covanta Burnaby Standing Offer 2024		
No. of samples received	: 12		
No. of samples analysed	: 12		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

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

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	Position	Laboratory Department
Janice Leung	Supervisor - Organics Instrumentation	Vancouver Organics, Burnaby, British Columbia
Owen Cheng		Vancouver Metals, Burnaby, British Columbia
Robin Weeks	Team Leader - Metals	Vancouver Metals, Burnaby, British Columbia
Wingyee Cheng	Analyst- General	Vancouver Metals, Burnaby, British Columbia



General Comments

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

Key :

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

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

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

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

Workorder Comments

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



Laboratory Duplicate (DUP) Report

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

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 1829335)											
VA24C0165-008	Anonymous	pH (1:2 soil:water)	----	E108	0.10	pH units	7.63	7.72	1.2%	5%	----
Physical Tests (QC Lot: 1829338)											
VA25A0065-001	Anonymous	Moisture	----	E144	0.25	%	6.65	6.68	0.537%	20%	----
Metals (QC Lot: 1829333)											
VA24C0165-008	Anonymous	Aluminum	7429-90-5	E440	50	mg/kg	24500	25500	4.12%	40%	----
		Antimony	7440-36-0	E440	0.10	mg/kg	0.34	0.35	0.02	Diff <2x LOR	----
		Arsenic	7440-38-2	E440	0.10	mg/kg	5.42	5.74	5.73%	30%	----
		Barium	7440-39-3	E440	0.50	mg/kg	109	118	7.44%	40%	----
		Beryllium	7440-41-7	E440	0.10	mg/kg	0.37	0.38	0.01	Diff <2x LOR	----
		Bismuth	7440-69-9	E440	0.20	mg/kg	<0.20	<0.20	0	Diff <2x LOR	----
		Boron	7440-42-8	E440	5.0	mg/kg	<5.0	5.5	0.5	Diff <2x LOR	----
		Cadmium	7440-43-9	E440	0.020	mg/kg	0.080	0.080	0.0006	Diff <2x LOR	----
		Calcium	7440-70-2	E440	50	mg/kg	7940	8950	11.9%	30%	----
		Chromium	7440-47-3	E440	0.50	mg/kg	40.3	40.9	1.61%	30%	----
		Cobalt	7440-48-4	E440	0.10	mg/kg	11.6	11.9	2.59%	30%	----
		Copper	7440-50-8	E440	0.50	mg/kg	37.4	38.2	1.92%	30%	----
		Iron	7439-89-6	E440	50	mg/kg	32100	33500	4.26%	30%	----
		Lead	7439-92-1	E440	0.50	mg/kg	5.99	5.47	9.02%	40%	----
		Lithium	7439-93-2	E440	2.0	mg/kg	15.7	15.9	1.06%	30%	----
		Magnesium	7439-95-4	E440	20	mg/kg	10200	10400	2.54%	30%	----
		Manganese	7439-96-5	E440	1.0	mg/kg	522	568	8.50%	30%	----
		Molybdenum	7439-98-7	E440	0.10	mg/kg	0.47	0.52	0.05	Diff <2x LOR	----
		Nickel	7440-02-0	E440	0.50	mg/kg	30.3	30.8	1.75%	30%	----
		Phosphorus	7723-14-0	E440	50	mg/kg	792	822	3.77%	30%	----
		Potassium	7440-09-7	E440	100	mg/kg	2410	2580	6.86%	40%	----
		Selenium	7782-49-2	E440	0.20	mg/kg	<0.20	<0.20	0	Diff <2x LOR	----
		Silver	7440-22-4	E440	0.10	mg/kg	0.11	0.10	0.004	Diff <2x LOR	----
		Sodium	7440-23-5	E440	50	mg/kg	954	1080	12.8%	40%	----
		Strontium	7440-24-6	E440	0.50	mg/kg	66.4	76.2	13.8%	40%	----
		Sulfur	7704-34-9	E440	1000	mg/kg	<1000	<1000	0	Diff <2x LOR	----



Sub-Matrix: Soil/Solid					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Metals (QC Lot: 1829333) - continued											
VA24C0165-008	Anonymous	Thallium	7440-28-0	E440	0.050	mg/kg	0.100	0.100	0.0002	Diff <2x LOR	----
		Tin	7440-31-5	E440	2.0	mg/kg	<2.0	<2.0	0	Diff <2x LOR	----
		Titanium	7440-32-6	E440	1.0	mg/kg	1460	1710	16.2%	40%	----
		Tungsten	7440-33-7	E440	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		Uranium	7440-61-1	E440	0.050	mg/kg	0.585	0.582	0.459%	30%	----
		Vanadium	7440-62-2	E440	0.20	mg/kg	79.4	84.6	6.31%	30%	----
		Zinc	7440-66-6	E440	2.0	mg/kg	70.6	70.2	0.657%	30%	----
		Zirconium	7440-67-7	E440	1.0	mg/kg	8.5	10.1	17.0%	30%	----
Metals (QC Lot: 1829334)											
VA24C0165-008	Anonymous	Mercury	7439-97-6	E510	0.0500	mg/kg	<0.0500	<0.0500	0	Diff <2x LOR	----
TCLP Metals (QC Lot: 1832713)											
VA25A0122-001	BA2452-A-1	Mercury, TCLP	7439-97-6	E512	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
TCLP Metals (QC Lot: 1832714)											
VA25A0122-001	BA2452-A-1	Antimony, TCLP	7440-36-0	E444	1.00	mg/L	<1.00	<1.00	0	Diff <2x LOR	----
		Arsenic, TCLP	7440-38-2	E444	1.0	mg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Barium, TCLP	7440-39-3	E444	2.5	mg/L	<2.5	<2.5	0	Diff <2x LOR	----
		Beryllium, TCLP	7440-41-7	E444	0.025	mg/L	<0.025	<0.025	0	Diff <2x LOR	----
		Boron, TCLP	7440-42-8	E444	0.50	mg/L	2.21	2.11	0.10	Diff <2x LOR	----
		Cadmium, TCLP	7440-43-9	E444	0.050	mg/L	0.068	0.064	0.003	Diff <2x LOR	----
		Calcium, TCLP	7440-70-2	E444	10	mg/L	1900	1810	5.18%	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	0.755	0.729	3.52%	30%	----
		Copper, TCLP	7440-50-8	E444	0.050	mg/L	0.705	0.674	4.38%	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	104	100	3.82%	30%	----
		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	1.51	1.44	0.07	Diff <2x LOR	----
		Zirconium, TCLP	7440-67-7	E444	10	mg/L	<10	<10	0	Diff <2x LOR	----



Method Blank (MB) Report

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

Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1829338)						
Moisture	---	E144	0.25	%	<0.25	----
Metals (QCLot: 1829333)						
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	----

Page : 6 of 11
 Work Order : VA25A0122
 Client : Reworld Renewable Burnaby, ULC
 Project : PO#46693 Weekly Bottom Ash-Suite



Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Metals (QCLot: 1829333) - continued						
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	----
Metals (QCLot: 1829334)						
Mercury	7439-97-6	E510	0.005	mg/kg	<0.0050	----
TCLP Metals (QCLot: 1832713)						
Mercury, TCLP	7439-97-6	E512	0.001	mg/L	<0.0010	----
TCLP Metals (QCLot: 1832714)						
Antimony, TCLP	7440-36-0	E444	0.1	mg/L	<0.10	----
Arsenic, TCLP	7440-38-2	E444	1	mg/L	<1.0	----
Barium, TCLP	7440-39-3	E444	2.5	mg/L	<2.5	----
Beryllium, TCLP	7440-41-7	E444	0.025	mg/L	<0.025	----
Boron, TCLP	7440-42-8	E444	0.5	mg/L	<0.50	----
Cadmium, TCLP	7440-43-9	E444	0.05	mg/L	<0.050	----
Calcium, TCLP	7440-70-2	E444	10	mg/L	<10	----
Chromium, TCLP	7440-47-3	E444	0.25	mg/L	<0.25	----
Cobalt, TCLP	7440-48-4	E444	0.05	mg/L	<0.050	----
Copper, TCLP	7440-50-8	E444	0.05	mg/L	<0.050	----
Iron, TCLP	7439-89-6	E444	5	mg/L	<5.0	----
Lead, TCLP	7439-92-1	E444	0.25	mg/L	<0.25	----
Magnesium, TCLP	7439-95-4	E444	2.5	mg/L	<2.5	----
Nickel, TCLP	7440-02-0	E444	0.25	mg/L	<0.25	----
Selenium, TCLP	7782-49-2	E444	0.1	mg/L	<0.10	----
Silver, TCLP	7440-22-4	E444	0.05	mg/L	<0.050	----
Thallium, TCLP	7440-28-0	E444	1	mg/L	<1.0	----
Uranium, TCLP	7440-61-1	E444	0.2	mg/L	<0.20	----
Vanadium, TCLP	7440-62-2	E444	0.15	mg/L	<0.15	----
Zinc, TCLP	7440-66-6	E444	0.5	mg/L	<0.50	----
Zirconium, TCLP	7440-67-7	E444	10	mg/L	<10	----



Laboratory Control Sample (LCS) Report

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

Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1829335)									
pH (1:2 soil:water)	----	E108	----	pH units	6 pH units	100	95.0	105	----
Physical Tests (QCLot: 1829338)									
Moisture	----	E144	0.25	%	50 %	99.7	90.0	110	----
Metals (QCLot: 1829333)									
Aluminum	7429-90-5	E440	50	mg/kg	200 mg/kg	98.6	80.0	120	----
Antimony	7440-36-0	E440	0.1	mg/kg	100 mg/kg	104	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	101	80.0	120	----
Beryllium	7440-41-7	E440	0.1	mg/kg	10 mg/kg	98.3	80.0	120	----
Bismuth	7440-69-9	E440	0.2	mg/kg	100 mg/kg	92.7	80.0	120	----
Boron	7440-42-8	E440	5	mg/kg	100 mg/kg	99.1	80.0	120	----
Cadmium	7440-43-9	E440	0.02	mg/kg	10 mg/kg	99.4	80.0	120	----
Calcium	7440-70-2	E440	50	mg/kg	5000 mg/kg	96.5	80.0	120	----
Chromium	7440-47-3	E440	0.5	mg/kg	25 mg/kg	99.2	80.0	120	----
Cobalt	7440-48-4	E440	0.1	mg/kg	25 mg/kg	98.0	80.0	120	----
Copper	7440-50-8	E440	0.5	mg/kg	25 mg/kg	95.0	80.0	120	----
Iron	7439-89-6	E440	50	mg/kg	100 mg/kg	94.9	80.0	120	----
Lead	7439-92-1	E440	0.5	mg/kg	50 mg/kg	96.2	80.0	120	----
Lithium	7439-93-2	E440	2	mg/kg	25 mg/kg	99.4	80.0	120	----
Magnesium	7439-95-4	E440	20	mg/kg	5000 mg/kg	107	80.0	120	----
Manganese	7439-96-5	E440	1	mg/kg	25 mg/kg	97.9	80.0	120	----
Molybdenum	7439-98-7	E440	0.1	mg/kg	25 mg/kg	107	80.0	120	----
Nickel	7440-02-0	E440	0.5	mg/kg	50 mg/kg	95.7	80.0	120	----
Phosphorus	7723-14-0	E440	50	mg/kg	1000 mg/kg	101	80.0	120	----
Potassium	7440-09-7	E440	100	mg/kg	5000 mg/kg	102	80.0	120	----
Selenium	7782-49-2	E440	0.2	mg/kg	100 mg/kg	105	80.0	120	----
Silver	7440-22-4	E440	0.1	mg/kg	10 mg/kg	96.4	80.0	120	----
Sodium	7440-23-5	E440	50	mg/kg	5000 mg/kg	98.7	80.0	120	----
Strontium	7440-24-6	E440	0.5	mg/kg	25 mg/kg	102	80.0	120	----
Sulfur	7704-34-9	E440	1000	mg/kg	5000 mg/kg	97.0	80.0	120	----
Thallium	7440-28-0	E440	0.05	mg/kg	100 mg/kg	94.0	80.0	120	----
Tin	7440-31-5	E440	2	mg/kg	50 mg/kg	107	80.0	120	----



Sub-Matrix: Soil/Solid					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Target Concentration	LCS	Low	High	Qualifier
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Metals (QCLot: 1829333) - continued									
Titanium	7440-32-6	E440	1	mg/kg	25 mg/kg	97.8	80.0	120	----
Tungsten	7440-33-7	E440	0.5	mg/kg	10 mg/kg	104	80.0	120	----
Uranium	7440-61-1	E440	0.05	mg/kg	0.5 mg/kg	102	80.0	120	----
Vanadium	7440-62-2	E440	0.2	mg/kg	50 mg/kg	98.0	80.0	120	----
Zinc	7440-66-6	E440	2	mg/kg	50 mg/kg	93.6	80.0	120	----
Zirconium	7440-67-7	E440	1	mg/kg	10 mg/kg	104	80.0	120	----
Metals (QCLot: 1829334)									
Mercury	7439-97-6	E510	0.005	mg/kg	0.1 mg/kg	100	80.0	120	----



Matrix Spike (MS) Report

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

Sub-Matrix: Soil/Solid

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
TCLP Metals (QCLot: 1832713)										
VA25A0122-001	BA2452-A-1	Mercury, TCLP	7439-97-6	E512	0.0010 mg/L	0.001 mg/L	98.5	50.0	140	----
TCLP Metals (QCLot: 1832714)										
VA25A0122-001	BA2452-A-1	Antimony, TCLP	7440-36-0	E444	4.58 mg/L	5 mg/L	91.6	50.0	140	----
		Arsenic, TCLP	7440-38-2	E444	4.8 mg/L	5 mg/L	95.4	50.0	140	----
		Barium, TCLP	7440-39-3	E444	12.0 mg/L	12.5 mg/L	96.4	50.0	140	----
		Beryllium, TCLP	7440-41-7	E444	0.225 mg/L	0.25 mg/L	90.0	50.0	140	----
		Boron, TCLP	7440-42-8	E444	8.83 mg/L	10 mg/L	88.3	50.0	140	----
		Cadmium, TCLP	7440-43-9	E444	0.225 mg/L	0.25 mg/L	90.1	50.0	140	----
		Calcium, TCLP	7440-70-2	E444	ND mg/L	----	ND	50.0	140	----
		Chromium, TCLP	7440-47-3	E444	1.13 mg/L	1.25 mg/L	90.1	50.0	140	----
		Cobalt, TCLP	7440-48-4	E444	ND mg/L	----	ND	50.0	140	----
		Copper, TCLP	7440-50-8	E444	2.14 mg/L	2.5 mg/L	85.6	50.0	140	----
		Iron, TCLP	7439-89-6	E444	222 mg/L	250 mg/L	88.7	50.0	140	----
		Lead, TCLP	7439-92-1	E444	8.61 mg/L	10 mg/L	86.1	50.0	140	----
		Magnesium, TCLP	7439-95-4	E444	241 mg/L	250 mg/L	96.4	50.0	140	----
		Nickel, TCLP	7440-02-0	E444	2.20 mg/L	2.5 mg/L	88.1	50.0	140	----
		Selenium, TCLP	7782-49-2	E444	4.76 mg/L	5 mg/L	95.3	50.0	140	----
		Silver, TCLP	7440-22-4	E444	0.080 mg/L	0.1 mg/L	79.6	50.0	140	----
		Thallium, TCLP	7440-28-0	E444	4.2 mg/L	5 mg/L	84.8	50.0	140	----
		Uranium, TCLP	7440-61-1	E444	4.60 mg/L	5 mg/L	92.1	50.0	150	----
		Vanadium, TCLP	7440-62-2	E444	0.68 mg/L	0.75 mg/L	90.2	50.0	140	----
		Zinc, TCLP	7440-66-6	E444	8.79 mg/L	10 mg/L	87.9	50.0	140	----
		Zirconium, TCLP	7440-67-7	E444	0.8 mg/L	1 mg/L	83.9	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:

Sub-Matrix:					Reference Material (RM) Report				
					RM Target Concentration	Recovery (%) RM	Recovery Limits (%)		Qualifier
Laboratory sample ID	Reference Material ID	Analyte	CAS Number	Method			Low	High	
Metals (QCLot: 1829333)									
QC-1829333-003	MRCA-21	Aluminum	7429-90-5	E440	22500 mg/kg	108	70.0	130	----
QC-1829333-003	MRCA-21	Antimony	7440-36-0	E440	24.8 mg/kg	104	70.0	130	----
QC-1829333-003	MRCA-21	Arsenic	7440-38-2	E440	21.2 mg/kg	107	70.0	130	----
QC-1829333-003	MRCA-21	Barium	7440-39-3	E440	788 mg/kg	102	70.0	130	----
QC-1829333-003	MRCA-21	Beryllium	7440-41-7	E440	1.82 mg/kg	107	70.0	130	----
QC-1829333-003	MRCA-21	Bismuth	7440-69-9	E440	1.78 mg/kg	95.0	70.0	130	----
QC-1829333-003	MRCA-21	Cadmium	7440-43-9	E440	2.15 mg/kg	99.2	70.0	130	----
QC-1829333-003	MRCA-21	Calcium	7440-70-2	E440	4900 mg/kg	101	70.0	130	----
QC-1829333-003	MRCA-21	Chromium	7440-47-3	E440	56.9 mg/kg	102	70.0	130	----
QC-1829333-003	MRCA-21	Cobalt	7440-48-4	E440	32 mg/kg	100	70.0	130	----
QC-1829333-003	MRCA-21	Copper	7440-50-8	E440	969 mg/kg	103	70.0	130	----
QC-1829333-003	MRCA-21	Iron	7439-89-6	E440	32700 mg/kg	102	70.0	130	----
QC-1829333-003	MRCA-21	Lead	7439-92-1	E440	919 mg/kg	97.0	70.0	130	----
QC-1829333-003	MRCA-21	Lithium	7439-93-2	E440	47.3 mg/kg	106	70.0	130	----
QC-1829333-003	MRCA-21	Magnesium	7439-95-4	E440	7780 mg/kg	107	70.0	130	----
QC-1829333-003	MRCA-21	Manganese	7439-96-5	E440	8640 mg/kg	101	70.0	130	----
QC-1829333-003	MRCA-21	Molybdenum	7439-98-7	E440	25.1 mg/kg	103	70.0	130	----
QC-1829333-003	MRCA-21	Nickel	7440-02-0	E440	1000 mg/kg	101	70.0	130	----
QC-1829333-003	MRCA-21	Phosphorus	7723-14-0	E440	660 mg/kg	91.3	70.0	130	----
QC-1829333-003	MRCA-21	Potassium	7440-09-7	E440	10800 mg/kg	104	70.0	130	----
QC-1829333-003	MRCA-21	Selenium	7782-49-2	E440	1.04 mg/kg	93.7	60.0	140	----
QC-1829333-003	MRCA-21	Silver	7440-22-4	E440	8.98 mg/kg	101	70.0	130	----
QC-1829333-003	MRCA-21	Sodium	7440-23-5	E440	1770 mg/kg	102	70.0	130	----
QC-1829333-003	MRCA-21	Strontium	7440-24-6	E440	41 mg/kg	102	70.0	130	----
QC-1829333-003	MRCA-21	Sulfur	7704-34-9	E440	3940 mg/kg	105	50.0	150	----
QC-1829333-003	MRCA-21	Thallium	7440-28-0	E440	0.907 mg/kg	95.5	70.0	130	----
QC-1829333-003	MRCA-21	Tin	7440-31-5	E440	3.79 mg/kg	99.4	40.0	160	----
QC-1829333-003	MRCA-21	Titanium	7440-32-6	E440	2790 mg/kg	101	70.0	130	----
QC-1829333-003	MRCA-21	Tungsten	7440-33-7	E440	6.99 mg/kg	106	70.0	130	----
QC-1829333-003	MRCA-21	Uranium	7440-61-1	E440	3.97 mg/kg	80.9	70.0	130	----
QC-1829333-003	MRCA-21	Vanadium	7440-62-2	E440	66.2 mg/kg	98.4	70.0	130	----
QC-1829333-003	MRCA-21	Zinc	7440-66-6	E440	828 mg/kg	97.8	70.0	130	----
QC-1829333-003	MRCA-21	Zirconium	7440-67-7	E440	6.91 mg/kg	102	70.0	130	----



Sub-Matrix:					Reference Material (RM) Report				
					RM Target Concentration	Recovery (%) RM	Recovery Limits (%)		Qualifier
Laboratory sample ID	Reference Material ID	Analyte	CAS Number	Method			Low	High	
Metals (QCLot: 1829334)									
QC-1829334-003	MRCA-21	Mercury	7439-97-6	E510	0.068 mg/kg	104	70.0	130	----

Report To			Report Format / Distribution			Service Requested (Rush for routine analysis subject to availability)																										
Company: Covanta Energy			☐ Standard ☐ Other			☒ Regular (Standard Turnaround Times - Business Days)																										
Contact: Nicole Victor / Dan Skrypnik			☒ PDF ☐ Excel ☐ Digital ☐ Fax			☐ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT																										
Address: 5150 Riverbend Drive			Email 1: nvictor@covanta.com			☐ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT																										
Burnaby BC			Email 2: rminchin@covanta.com			☐ Same Day or Weekend Emergency - Contact ALS to Confirm TAT																										
Phone: 604-521-1025			Fax:			Email 3: dskrypnik@covanta.com			Analysis Request																							
☐ Yes ☐ No			brent.kirkpatrick@metrovancover.org																													
Sarah.Wellman@metrovancover.org																																
Invoice To Same as Report ?			Client / Project Information			Please indicate below Filtered, Preserved or both (F, P, F/P)																										
Hardcopy of Invoice with Report? ☐ Yes ☐ No			Job #:																													
Company:			PO / AFE: PO# 46693 Weekly Bottom Ash - Suite																													
Contact:			LSD: (includes 2:1 pH)																													
Address:			Quote #:																													
Phone:																																
Lab Work Order # (lab use only)			ALS Contact:			Sampler:												Number of Containers														
A0122																																
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			Chromium 6			MET-CSR+FULL-VA (all metals)								
BA2452-A-1						25-Dec-24			9:00			Soil			X X									X						1		
BA2452-A-2						25-Dec-24			9:00			Soil			X X									X						1		
BA2452-A-3						25-Dec-24			9:00			Soil			X X									X						1		
BA2452-A-4						25-Dec-24			9:00			Soil			X X									X						1		
BA2452-A-5						25-Dec-24			9:00			Soil			X X									X						1		
BA2452-A-6						25-Dec-24			9:00			Soil			X X									X						1		
BA2452-A-7						25-Dec-24			9:00			Soil			X X									X						1		
BA2452-A-8						25-Dec-24			9:00			Soil			X X									X						1		
BA2452-A-9						25-Dec-24			9:00			Soil			X X									X						1		
BA2452-A-10						25-Dec-24			9:00			Soil			X X									X						1		
BA2452-A-11						25-Dec-24			9:00			Soil			X X									X						1		
BA2452-A-12						25-Dec-24			9:00			Soil			X X									X						1		
Special Instru			Environmental Division Vancouver Work Order Reference VA25A0122			se (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details																										
Telephone : +1 604 253 4186																																
Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.																																
By the use of this form the user acknowledges and agrees with the Terms and Conditions as provided on a separate Excel tab.																																
Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.																																
SHIPMENT RELEASE (client use)					SHIPMENT RECEPTION (lab use only)					SHIPMENT VERIFICATION (lab use only)																						
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												
ly		3-Jan-25		0800		CW		Jan 3		12pm		14 °C																				
GENF 20.00 Front																																