

Bottom Ash Data

2025 Week 06

The following analytical report represents bottom ash composite results for week 06 of 2025 (February 2, 2025 to February 8, 2025).

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

CERTIFICATE OF ANALYSIS

Work Order	: VA25A3327		
Client	: Reworld Renewable Burnaby, ULC	Laboratory	: ALS Environmental - Vancouver
Contact	: Nicole Victor	Account Manager	: Gulraj Dhanaua
Address	: 5150 Riverbend Drive	Address	: 8081 Lougheed Highway
	: Burnaby British Columbia Canada V3N 4V3		: Burnaby BC Canada V5A 1W9
Telephone	: ----	Telephone	: +1 604 253 4188
Project	: ----	Date Samples Received	: 14-Feb-2025 11:00
PO	: ----	Date Analysis Commenced	: 18-Feb-2025
C-O-C number	: ----	Issue Date	: 20-Feb-2025 22:50
Sampler	: ----		
Site	: ----		
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
Robin Weeks	Team Leader - Metals	Metals, Burnaby, British Columbia



General Comments

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

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

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

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

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

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	BA2506-A-1	BA2506-A-2	BA2506-A-3	BA2506-A-4	BA2506-A-5
Client sampling date / time					05-Feb-2025 09:00	05-Feb-2025 09:00	05-Feb-2025 09:00	05-Feb-2025 09:00	05-Feb-2025 09:00	
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A3327-001	VA25A3327-002	VA25A3327-003	VA25A3327-004	VA25A3327-005	
					Result	Result	Result	Result	Result	
Physical Tests										
Moisture	----	E144/VA	0.25	%	23.8	23.4	23.4	22.8	23.7	
pH (1:2 soil:water)	----	E108/VA	0.10	pH units	11.8	11.6	11.6	11.9	11.8	
Metals										
Aluminum	7429-90-5	E440/VA	50	mg/kg	33800	48200	42400	44800	50600	
Antimony	7440-36-0	E440/VA	0.10	mg/kg	92.5	87.4	89.3	84.0	88.4	
Arsenic	7440-38-2	E440/VA	0.10	mg/kg	18.2	13.5	14.3	14.4	17.4	
Barium	7440-39-3	E440/VA	0.50	mg/kg	596	886	615	611	628	
Beryllium	7440-41-7	E440/VA	0.10	mg/kg	0.45	0.37	0.38	0.37	0.35	
Bismuth	7440-69-9	E440/VA	0.20	mg/kg	8.39	11.2	8.84	7.98	10.7	
Boron	7440-42-8	E440/VA	5.0	mg/kg	233	285	178	158	203	
Cadmium	7440-43-9	E440/VA	0.020	mg/kg	9.06	10.8	5.94	7.87	8.21	
Calcium	7440-70-2	E440/VA	50	mg/kg	132000	128000	132000	135000	124000	
Chromium	7440-47-3	E440/VA	0.50	mg/kg	281	228	304	225	161	
Cobalt	7440-48-4	E440/VA	0.10	mg/kg	103	138	146	72.5	54.2	
Copper	7440-50-8	E440/VA	0.50	mg/kg	9000	1900	1740	4750	29700	
Iron	7439-89-6	E440/VA	50	mg/kg	76800	80800	79200	60600	62700	
Lead	7439-92-1	E440/VA	0.50	mg/kg	295	1500	418	374	318	
Lithium	7439-93-2	E440/VA	2.0	mg/kg	52.4	29.3	49.9	28.2	28.4	
Magnesium	7439-95-4	E440/VA	20	mg/kg	10600	10800	11600	12100	10700	
Manganese	7439-96-5	E440/VA	1.0	mg/kg	816	1170	916	818	931	
Mercury	7439-97-6	E510/VA	0.0500	mg/kg	0.255	0.198	0.270	0.318	0.192	



Analytical Results

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

Sub-Matrix: Soil (Matrix: Soil/Solid)					Client sample ID	BA2506-A-1	BA2506-A-2	BA2506-A-3	BA2506-A-4	BA2506-A-5
Client sampling date / time					05-Feb-2025 09:00	05-Feb-2025 09:00	05-Feb-2025 09:00	05-Feb-2025 09:00	05-Feb-2025 09:00	05-Feb-2025 09:00
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A3327-001	VA25A3327-002	VA25A3327-003	VA25A3327-004	VA25A3327-005	
					Result	Result	Result	Result	Result	
Metals										
Molybdenum	7439-98-7	E440/VA	0.10	mg/kg	18.3	17.8	15.9	16.1	28.4	
Nickel	7440-02-0	E440/VA	0.50	mg/kg	214	334	260	173	243	
Phosphorus	7723-14-0	E440/VA	50	mg/kg	11800	8830	9680	9880	9800	
Potassium	7440-09-7	E440/VA	100	mg/kg	4140	4240	4740	4500	4270	
Selenium	7782-49-2	E440/VA	0.20	mg/kg	0.37	0.30	0.36	0.36	0.35	
Silver	7440-22-4	E440/VA	0.10	mg/kg	4.94	7.62	4.08	4.06	6.58	
Sodium	7440-23-5	E440/VA	50	mg/kg	15400	15600	17200	16200	16200	
Strontium	7440-24-6	E440/VA	0.50	mg/kg	265	268	290	302	294	
Sulfur	7704-34-9	E440/VA	1000	mg/kg	10100	8800	10300	10300	9800	
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	172	109	107	97.6	120	
Titanium	7440-32-6	E440/VA	1.0	mg/kg	335	320	297	263	293	
Tungsten	7440-33-7	E440/VA	0.50	mg/kg	22.3	16.1	23.7	15.7	19.7	
Uranium	7440-61-1	E440/VA	0.050	mg/kg	1.68	1.60	1.75	1.63	1.71	
Vanadium	7440-62-2	E440/VA	0.20	mg/kg	34.1	35.1	32.0	31.9	32.2	
Zinc	7440-66-6	E440/VA	2.0	mg/kg	7060	3070	2890	5090	3400	
Zirconium	7440-67-7	E440/VA	1.0	mg/kg	2.1	3.0	2.8	4.5	4.2	
TCLP Metals										
pH, TCLP 1st preliminary	----	EPP444/VA	0.010	pH units	11.9	12.0	12.0	12.0	12.0	
pH, TCLP 2nd preliminary	----	EPP444/VA	0.010	pH units	5.83	5.85	6.36	6.07	5.84	
pH, TCLP extraction fluid initial	----	EPP444/VA	0.010	pH units	2.88	2.88	2.88	2.88	2.88	



Analytical Results

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

Sub-Matrix: Soil (Matrix: Soil/Solid)					Client sample ID	BA2506-A-1	BA2506-A-2	BA2506-A-3	BA2506-A-4	BA2506-A-5
Client sampling date / time					05-Feb-2025 09:00	05-Feb-2025 09:00	05-Feb-2025 09:00	05-Feb-2025 09:00	05-Feb-2025 09:00	
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A3327-001	VA25A3327-002	VA25A3327-003	VA25A3327-004	VA25A3327-005	
					Result	Result	Result	Result	Result	
TCLP Metals										
pH, TCLP final	----	EPP444/VA	0.010	pH units	6.93	7.18	7.10	7.49	7.19	
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	1.80	1.89	2.22	2.16	2.14	
Cadmium, TCLP	7440-43-9	E444/VA	0.050	mg/L	<0.050	<0.050	<0.050	<0.050	0.383	
Calcium, TCLP	7440-70-2	E444/VA	10	mg/L	1760	1790	1850	1850	1880	
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	0.399	0.567	0.905	0.669	1.01	
Copper, TCLP	7440-50-8	E444/VA	0.050	mg/L	0.688	0.668	0.724	0.763	0.704	
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	113	114	114	123	116	
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	0.29	0.26	<0.25	0.27	
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	BA2506-A-1	BA2506-A-2	BA2506-A-3	BA2506-A-4	BA2506-A-5
Client sampling date / time						05-Feb-2025 09:00	05-Feb-2025 09:00	05-Feb-2025 09:00	05-Feb-2025 09:00	05-Feb-2025 09:00
Analyte	CAS Number	Method/Lab	LOR	Unit		VA25A3327-001	VA25A3327-002	VA25A3327-003	VA25A3327-004	VA25A3327-005
						Result	Result	Result	Result	Result
TCLP Metals										
Zinc, TCLP	7440-66-6	E444/VA	0.50	mg/L		1.16	1.62	2.38	0.78	2.32
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	BA2506-A-6	BA2506-A-7	BA2506-A-8	BA2506-A-9	BA2506-A-10
Client sampling date / time						05-Feb-2025 09:00	05-Feb-2025 09:00	05-Feb-2025 09:00	05-Feb-2025 09:00	05-Feb-2025 09:00
Analyte	CAS Number	Method/Lab	LOR	Unit		VA25A3327-006	VA25A3327-007	VA25A3327-008	VA25A3327-009	VA25A3327-010
						Result	Result	Result	Result	Result
Physical Tests										
Moisture	----	E144/VA	0.25	%		23.7	22.8	23.6	22.6	23.6
pH (1:2 soil:water)	----	E108/VA	0.10	pH units		12.0	11.3	11.8	11.1	11.5
Metals										
Aluminum	7429-90-5	E440/VA	50	mg/kg		42200	35400	44500	37300	35200
Antimony	7440-36-0	E440/VA	0.10	mg/kg		87.5	97.3	203	82.8	82.0
Arsenic	7440-38-2	E440/VA	0.10	mg/kg		13.8	16.8	17.8	38.5	12.7
Barium	7440-39-3	E440/VA	0.50	mg/kg		573	589	614	679	722
Beryllium	7440-41-7	E440/VA	0.10	mg/kg		0.36	0.38	0.38	0.40	0.38
Bismuth	7440-69-9	E440/VA	0.20	mg/kg		12.9	7.87	8.32	7.65	7.23
Boron	7440-42-8	E440/VA	5.0	mg/kg		156	225	219	208	188
Cadmium	7440-43-9	E440/VA	0.020	mg/kg		5.36	12.3	5.53	5.80	5.55
Calcium	7440-70-2	E440/VA	50	mg/kg		129000	131000	134000	136000	124000



Analytical Results

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

Sub-Matrix: Soil (Matrix: Soil/Solid)					Client sample ID	BA2506-A-6	BA2506-A-7	BA2506-A-8	BA2506-A-9	BA2506-A-10
Client sampling date / time					05-Feb-2025 09:00	05-Feb-2025 09:00	05-Feb-2025 09:00	05-Feb-2025 09:00	05-Feb-2025 09:00	05-Feb-2025 09:00
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A3327-006	VA25A3327-007	VA25A3327-008	VA25A3327-009	VA25A3327-010	
					Result	Result	Result	Result	Result	
Metals										
Chromium	7440-47-3	E440/VA	0.50	mg/kg	168	257	221	192	164	
Cobalt	7440-48-4	E440/VA	0.10	mg/kg	84.3	114	633	1220	87.1	
Copper	7440-50-8	E440/VA	0.50	mg/kg	3510	1720	19700	3470	5660	
Iron	7439-89-6	E440/VA	50	mg/kg	81900	76500	52100	71800	86900	
Lead	7439-92-1	E440/VA	0.50	mg/kg	877	456	1370	986	1670	
Lithium	7439-93-2	E440/VA	2.0	mg/kg	27.1	29.3	159	128	25.3	
Magnesium	7439-95-4	E440/VA	20	mg/kg	12000	12400	10800	11800	10500	
Manganese	7439-96-5	E440/VA	1.0	mg/kg	1080	1120	1020	913	1080	
Mercury	7439-97-6	E510/VA	0.0500	mg/kg	0.190	0.213	0.832	0.274	0.210	
Molybdenum	7439-98-7	E440/VA	0.10	mg/kg	17.8	22.4	19.0	19.8	17.5	
Nickel	7440-02-0	E440/VA	0.50	mg/kg	218	415	510	551	353	
Phosphorus	7723-14-0	E440/VA	50	mg/kg	8400	11100	10800	10600	8580	
Potassium	7440-09-7	E440/VA	100	mg/kg	4130	5310	4230	4920	4230	
Selenium	7782-49-2	E440/VA	0.20	mg/kg	0.33	0.34	0.32	0.27	0.34	
Silver	7440-22-4	E440/VA	0.10	mg/kg	4.19	4.79	4.72	4.14	>81.6	
Sodium	7440-23-5	E440/VA	50	mg/kg	14500	18100	15600	17800	16300	
Strontium	7440-24-6	E440/VA	0.50	mg/kg	351	267	270	277	548	
Sulfur	7704-34-9	E440/VA	1000	mg/kg	9900	9600	8900	9500	9100	
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	105	192	134	96.0	129	
Titanium	7440-32-6	E440/VA	1.0	mg/kg	277	366	303	228	386	



Analytical Results

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

Sub-Matrix: Soil (Matrix: Soil/Solid)					Client sample ID	BA2506-A-6	BA2506-A-7	BA2506-A-8	BA2506-A-9	BA2506-A-10
Client sampling date / time					05-Feb-2025 09:00	05-Feb-2025 09:00	05-Feb-2025 09:00	05-Feb-2025 09:00	05-Feb-2025 09:00	05-Feb-2025 09:00
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A3327-006	VA25A3327-007	VA25A3327-008	VA25A3327-009	VA25A3327-010	
					Result	Result	Result	Result	Result	
Metals										
Tungsten	7440-33-7	E440/VA	0.50	mg/kg	19.8	28.7	24.2	23.8	211	
Uranium	7440-61-1	E440/VA	0.050	mg/kg	1.61	2.12	1.74	1.80	1.70	
Vanadium	7440-62-2	E440/VA	0.20	mg/kg	32.5	36.3	31.4	28.3	26.7	
Zinc	7440-66-6	E440/VA	2.0	mg/kg	2870	2900	3720	4030	9050	
Zirconium	7440-67-7	E440/VA	1.0	mg/kg	3.8	2.3	3.4	5.5	1.7	
TCLP Metals										
pH, TCLP 1st preliminary	----	EPP444/VA	0.010	pH units	12.0	11.8	11.9	11.7	11.9	
pH, TCLP 2nd preliminary	----	EPP444/VA	0.010	pH units	6.54	5.27	6.08	5.91	5.84	
pH, TCLP extraction fluid initial	----	EPP444/VA	0.010	pH units	2.88	2.88	2.88	2.88	2.88	
pH, TCLP final	----	EPP444/VA	0.010	pH units	7.40	6.80	6.97	6.53	6.85	
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	1.93	1.95	2.03	1.92	1.96	
Cadmium, TCLP	7440-43-9	E444/VA	0.050	mg/L	<0.050	0.063	0.062	0.087	0.423	
Calcium, TCLP	7440-70-2	E444/VA	10	mg/L	1900	1850	1790	1810	1880	
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	0.539	0.914	0.735	0.913	0.959	
Copper, TCLP	7440-50-8	E444/VA	0.050	mg/L	0.796	0.840	0.658	0.830	0.766	
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	BA2506-A-6	BA2506-A-7	BA2506-A-8	BA2506-A-9	BA2506-A-10
					Client sampling date / time	05-Feb-2025 09:00	05-Feb-2025 09:00	05-Feb-2025 09:00	05-Feb-2025 09:00	05-Feb-2025 09:00
Analyte	CAS Number	Method/Lab	LOR	Unit		VA25A3327-006	VA25A3327-007	VA25A3327-008	VA25A3327-009	VA25A3327-010
						Result	Result	Result	Result	Result
TCLP Metals										
Lead, TCLP	7439-92-1	E444/VA	0.25	mg/L		<0.25	<0.25	0.30	<0.25	<0.25
Magnesium, TCLP	7439-95-4	E444/VA	2.5	mg/L		121	120	117	124	118
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	0.40	0.31	0.45	0.54
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		1.44	8.04	4.91	16.8	8.14
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	BA2506-A-11	BA2506-A-12	----	----	----
					Client sampling date / time	05-Feb-2025 09:00	05-Feb-2025 09:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		VA25A3327-011	VA25A3327-012	----	----	----
						Result	Result	----	----	----
Physical Tests										
Moisture	----	E144/VA	0.25	%		22.8	23.2	----	----	----
pH (1:2 soil:water)	----	E108/VA	0.10	pH units		11.0	11.6	----	----	----



Analytical Results

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

					Client sample ID	BA2506-A-11	BA2506-A-12	----	----	----
					Client sampling date / time	05-Feb-2025 09:00	05-Feb-2025 09:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A3327-011	VA25A3327-012	----	----	----	----
					Result	Result	----	----	----	----
Metals										
Aluminum	7429-90-5	E440/VA	50	mg/kg	39300	46200	----	----	----	----
Antimony	7440-36-0	E440/VA	0.10	mg/kg	85.3	64.9	----	----	----	----
Arsenic	7440-38-2	E440/VA	0.10	mg/kg	11.9	13.5	----	----	----	----
Barium	7440-39-3	E440/VA	0.50	mg/kg	756	540	----	----	----	----
Beryllium	7440-41-7	E440/VA	0.10	mg/kg	0.37	0.39	----	----	----	----
Bismuth	7440-69-9	E440/VA	0.20	mg/kg	6.99	8.23	----	----	----	----
Boron	7440-42-8	E440/VA	5.0	mg/kg	203	194	----	----	----	----
Cadmium	7440-43-9	E440/VA	0.020	mg/kg	5.60	6.29	----	----	----	----
Calcium	7440-70-2	E440/VA	50	mg/kg	135000	136000	----	----	----	----
Chromium	7440-47-3	E440/VA	0.50	mg/kg	262	248	----	----	----	----
Cobalt	7440-48-4	E440/VA	0.10	mg/kg	99.0	43.7	----	----	----	----
Copper	7440-50-8	E440/VA	0.50	mg/kg	2200	3410	----	----	----	----
Iron	7439-89-6	E440/VA	50	mg/kg	76900	55200	----	----	----	----
Lead	7439-92-1	E440/VA	0.50	mg/kg	282	1650	----	----	----	----
Lithium	7439-93-2	E440/VA	2.0	mg/kg	37.8	50.0	----	----	----	----
Magnesium	7439-95-4	E440/VA	20	mg/kg	12000	11200	----	----	----	----
Manganese	7439-96-5	E440/VA	1.0	mg/kg	844	1230	----	----	----	----
Mercury	7439-97-6	E510/VA	0.0500	mg/kg	0.247	0.419	----	----	----	----
Molybdenum	7439-98-7	E440/VA	0.10	mg/kg	24.2	24.8	----	----	----	----
Nickel	7440-02-0	E440/VA	0.50	mg/kg	345	406	----	----	----	----
Phosphorus	7723-14-0	E440/VA	50	mg/kg	9580	9880	----	----	----	----



Analytical Results

Sub-Matrix: Soil (Matrix: Soil/Solid)					Client sample ID	BA2506-A-11	BA2506-A-12	----	----	----
Client sampling date / time					05-Feb-2025 09:00	05-Feb-2025 09:00	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A3327-011	VA25A3327-012	----	----	----	----
					Result	Result	----	----	----	----
Metals										
Potassium	7440-09-7	E440/VA	100	mg/kg	4880	4810	----	----	----	----
Selenium	7782-49-2	E440/VA	0.20	mg/kg	0.27	0.26	----	----	----	----
Silver	7440-22-4	E440/VA	0.10	mg/kg	3.54	>40.9	----	----	----	----
Sodium	7440-23-5	E440/VA	50	mg/kg	18000	16400	----	----	----	----
Strontium	7440-24-6	E440/VA	0.50	mg/kg	302	272	----	----	----	----
Sulfur	7704-34-9	E440/VA	1000	mg/kg	9500	9800	----	----	----	----
Thallium	7440-28-0	E440/VA	0.050	mg/kg	0.051	<0.050	----	----	----	----
Tin	7440-31-5	E440/VA	2.0	mg/kg	120	101	----	----	----	----
Titanium	7440-32-6	E440/VA	1.0	mg/kg	344	286	----	----	----	----
Tungsten	7440-33-7	E440/VA	0.50	mg/kg	31.7	32.7	----	----	----	----
Uranium	7440-61-1	E440/VA	0.050	mg/kg	1.74	1.71	----	----	----	----
Vanadium	7440-62-2	E440/VA	0.20	mg/kg	31.0	33.1	----	----	----	----
Zinc	7440-66-6	E440/VA	2.0	mg/kg	3330	4020	----	----	----	----
Zirconium	7440-67-7	E440/VA	1.0	mg/kg	2.3	6.8	----	----	----	----
TCLP Metals										
pH, TCLP 1st preliminary	----	EPP444/VA	0.010	pH units	11.8	12.0	----	----	----	----
pH, TCLP 2nd preliminary	----	EPP444/VA	0.010	pH units	5.42	5.75	----	----	----	----
pH, TCLP extraction fluid initial	----	EPP444/VA	0.010	pH units	2.88	2.88	----	----	----	----
pH, TCLP final	----	EPP444/VA	0.010	pH units	6.54	6.77	----	----	----	----
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	BA2506-A-11	BA2506-A-12	----	----	----
					Client sampling date / time	05-Feb-2025 09:00	05-Feb-2025 09:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A3327-011	VA25A3327-012	----	----	----	----
					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	1.84	1.90	----	----	----	----
Cadmium, TCLP	7440-43-9	E444/VA	0.050	mg/L	0.053	<0.050	----	----	----	----
Calcium, TCLP	7440-70-2	E444/VA	10	mg/L	1760	1810	----	----	----	----
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	0.834	0.894	----	----	----	----
Copper, TCLP	7440-50-8	E444/VA	0.050	mg/L	0.801	0.757	----	----	----	----
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	117	----	----	----	----
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	0.56	0.46	----	----	----	----
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	12.8	12.5	----	----	----	----
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	: VA25A3327	Page	: 1 of 16
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	: ----	Date Samples Received	: 14-Feb-2025 11:00
PO	: ----	Issue Date	: 20-Feb-2025 22:50
C-O-C number	: ----		
Sampler	: ----		
Site	: ----		
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 Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- Duplicate outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **Soil/Solid**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Duplicate (DUP) RPDs								
Metals	VA25A3327-001	BA2506-A-1	Cadmium	7440-43-9	E440	38.4 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	VA25A3327-001	BA2506-A-1	Chromium	7440-47-3	E440	38.5 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	VA25A3327-001	BA2506-A-1	Cobalt	7440-48-4	E440	75.3 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	VA25A3327-001	BA2506-A-1	Copper	7440-50-8	E440	117 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	VA25A3327-001	BA2506-A-1	Lithium	7439-93-2	E440	41.8 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	VA25A3327-001	BA2506-A-1	Nickel	7440-02-0	E440	105 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	VA25A3327-001	BA2506-A-1	Tin	7440-31-5	E440	40.5 % DUP-H	40%	Duplicate RPD does not meet the DQO for this test.

Result Qualifiers

Qualifier Description

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



Analysis Holding Time Compliance

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

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

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

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

Matrix: **Soil/Solid**

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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA2506-A-1	E510	05-Feb-2025	19-Feb-2025	28 days	14 days	✓	20-Feb-2025	28 days	0 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA2506-A-10	E510	05-Feb-2025	19-Feb-2025	28 days	14 days	✓	20-Feb-2025	28 days	0 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA2506-A-11	E510	05-Feb-2025	19-Feb-2025	28 days	14 days	✓	20-Feb-2025	28 days	0 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA2506-A-12	E510	05-Feb-2025	19-Feb-2025	28 days	14 days	✓	20-Feb-2025	28 days	0 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA2506-A-2	E510	05-Feb-2025	19-Feb-2025	28 days	14 days	✓	20-Feb-2025	28 days	0 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA2506-A-3	E510	05-Feb-2025	19-Feb-2025	28 days	14 days	✓	20-Feb-2025	28 days	0 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA2506-A-4	E510	05-Feb-2025	19-Feb-2025	28 days	14 days	✓	20-Feb-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	
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA2506-A-5	E510	05-Feb-2025	19-Feb-2025	28 days	14 days	✓	20-Feb-2025	28 days	0 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA2506-A-6	E510	05-Feb-2025	19-Feb-2025	28 days	14 days	✓	20-Feb-2025	28 days	0 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA2506-A-7	E510	05-Feb-2025	19-Feb-2025	28 days	14 days	✓	20-Feb-2025	28 days	0 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA2506-A-8	E510	05-Feb-2025	19-Feb-2025	28 days	14 days	✓	20-Feb-2025	28 days	0 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA2506-A-9	E510	05-Feb-2025	19-Feb-2025	28 days	14 days	✓	20-Feb-2025	28 days	0 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
LDPE bag BA2506-A-1	E440	05-Feb-2025	19-Feb-2025	180 days	14 days	✓	20-Feb-2025	180 days	15 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
LDPE bag BA2506-A-10	E440	05-Feb-2025	19-Feb-2025	180 days	14 days	✓	20-Feb-2025	180 days	15 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
LDPE bag BA2506-A-11	E440	05-Feb-2025	19-Feb-2025	180 days	14 days	✓	20-Feb-2025	180 days	15 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
LDPE bag BA2506-A-12	E440	05-Feb-2025	19-Feb-2025	180 days	14 days	✓	20-Feb-2025	180 days	15 days	✓



Matrix: Soil/Solid

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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Metals : Metals in Soil/Solid by CRC ICPMS										
LDPE bag BA2506-A-2	E440	05-Feb-2025	19-Feb-2025	180 days	14 days	✓	20-Feb-2025	180 days	15 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
LDPE bag BA2506-A-3	E440	05-Feb-2025	19-Feb-2025	180 days	14 days	✓	20-Feb-2025	180 days	15 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
LDPE bag BA2506-A-4	E440	05-Feb-2025	19-Feb-2025	180 days	14 days	✓	20-Feb-2025	180 days	15 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
LDPE bag BA2506-A-5	E440	05-Feb-2025	19-Feb-2025	180 days	14 days	✓	20-Feb-2025	180 days	15 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
LDPE bag BA2506-A-6	E440	05-Feb-2025	19-Feb-2025	180 days	14 days	✓	20-Feb-2025	180 days	15 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
LDPE bag BA2506-A-7	E440	05-Feb-2025	19-Feb-2025	180 days	14 days	✓	20-Feb-2025	180 days	15 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
LDPE bag BA2506-A-8	E440	05-Feb-2025	19-Feb-2025	180 days	14 days	✓	20-Feb-2025	180 days	15 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
LDPE bag BA2506-A-9	E440	05-Feb-2025	19-Feb-2025	180 days	14 days	✓	20-Feb-2025	180 days	15 days	✓
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA2506-A-1	E144	05-Feb-2025	----	----	----		18-Feb-2025	----	13 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 BA2506-A-10	E144	05-Feb-2025	----	----	----		18-Feb-2025	----	13 days	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA2506-A-11	E144	05-Feb-2025	----	----	----		18-Feb-2025	----	13 days	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA2506-A-12	E144	05-Feb-2025	----	----	----		18-Feb-2025	----	13 days	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA2506-A-2	E144	05-Feb-2025	----	----	----		18-Feb-2025	----	13 days	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA2506-A-3	E144	05-Feb-2025	----	----	----		18-Feb-2025	----	13 days	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA2506-A-4	E144	05-Feb-2025	----	----	----		18-Feb-2025	----	13 days	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA2506-A-5	E144	05-Feb-2025	----	----	----		18-Feb-2025	----	13 days	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA2506-A-6	E144	05-Feb-2025	----	----	----		18-Feb-2025	----	13 days	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA2506-A-7	E144	05-Feb-2025	----	----	----		18-Feb-2025	----	13 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 BA2506-A-8	E144	05-Feb-2025	----	----	----		18-Feb-2025	----	13 days	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA2506-A-9	E144	05-Feb-2025	----	----	----		18-Feb-2025	----	13 days	
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA2506-A-1	E108	05-Feb-2025	19-Feb-2025	30 days	14 days	✓	20-Feb-2025	30 days	15 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA2506-A-10	E108	05-Feb-2025	19-Feb-2025	30 days	14 days	✓	20-Feb-2025	30 days	15 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA2506-A-11	E108	05-Feb-2025	19-Feb-2025	30 days	14 days	✓	20-Feb-2025	30 days	15 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA2506-A-12	E108	05-Feb-2025	19-Feb-2025	30 days	14 days	✓	20-Feb-2025	30 days	15 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA2506-A-2	E108	05-Feb-2025	19-Feb-2025	30 days	14 days	✓	20-Feb-2025	30 days	15 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA2506-A-3	E108	05-Feb-2025	19-Feb-2025	30 days	14 days	✓	20-Feb-2025	30 days	15 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA2506-A-4	E108	05-Feb-2025	19-Feb-2025	30 days	14 days	✓	20-Feb-2025	30 days	15 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 BA2506-A-5	E108	05-Feb-2025	19-Feb-2025	30 days	14 days	✓	20-Feb-2025	30 days	15 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA2506-A-6	E108	05-Feb-2025	19-Feb-2025	30 days	14 days	✓	20-Feb-2025	30 days	15 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA2506-A-7	E108	05-Feb-2025	19-Feb-2025	30 days	14 days	✓	20-Feb-2025	30 days	15 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA2506-A-8	E108	05-Feb-2025	19-Feb-2025	30 days	14 days	✓	20-Feb-2025	30 days	15 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA2506-A-9	E108	05-Feb-2025	19-Feb-2025	30 days	14 days	✓	20-Feb-2025	30 days	15 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA2506-A-1	E512	18-Feb-2025	20-Feb-2025	41 days	15 days	✓	20-Feb-2025	41 days	15 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA2506-A-10	E512	18-Feb-2025	20-Feb-2025	41 days	15 days	✓	20-Feb-2025	41 days	15 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA2506-A-11	E512	18-Feb-2025	20-Feb-2025	41 days	15 days	✓	20-Feb-2025	41 days	15 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA2506-A-12	E512	18-Feb-2025	20-Feb-2025	41 days	15 days	✓	20-Feb-2025	41 days	15 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) BA2506-A-2	E512	18-Feb-2025	20-Feb-2025	41 days	15 days	✓	20-Feb-2025	41 days	15 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA2506-A-3	E512	18-Feb-2025	20-Feb-2025	41 days	15 days	✓	20-Feb-2025	41 days	15 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA2506-A-4	E512	18-Feb-2025	20-Feb-2025	41 days	15 days	✓	20-Feb-2025	41 days	15 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA2506-A-5	E512	18-Feb-2025	20-Feb-2025	41 days	15 days	✓	20-Feb-2025	41 days	15 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA2506-A-6	E512	18-Feb-2025	20-Feb-2025	41 days	15 days	✓	20-Feb-2025	41 days	15 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA2506-A-7	E512	18-Feb-2025	20-Feb-2025	41 days	15 days	✓	20-Feb-2025	41 days	15 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA2506-A-8	E512	18-Feb-2025	20-Feb-2025	41 days	15 days	✓	20-Feb-2025	41 days	15 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA2506-A-9	E512	18-Feb-2025	20-Feb-2025	41 days	15 days	✓	20-Feb-2025	41 days	15 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA2506-A-1	E444	18-Feb-2025	20-Feb-2025	193 days	15 days	✓	20-Feb-2025	193 days	15 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) BA2506-A-10	E444	18-Feb-2025	20-Feb-2025	193 days	15 days	✓	20-Feb-2025	193 days	15 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA2506-A-11	E444	18-Feb-2025	20-Feb-2025	193 days	15 days	✓	20-Feb-2025	193 days	15 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA2506-A-12	E444	18-Feb-2025	20-Feb-2025	193 days	15 days	✓	20-Feb-2025	193 days	15 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA2506-A-2	E444	18-Feb-2025	20-Feb-2025	193 days	15 days	✓	20-Feb-2025	193 days	15 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA2506-A-3	E444	18-Feb-2025	20-Feb-2025	193 days	15 days	✓	20-Feb-2025	193 days	15 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA2506-A-4	E444	18-Feb-2025	20-Feb-2025	193 days	15 days	✓	20-Feb-2025	193 days	15 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA2506-A-5	E444	18-Feb-2025	20-Feb-2025	193 days	15 days	✓	20-Feb-2025	193 days	15 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA2506-A-6	E444	18-Feb-2025	20-Feb-2025	193 days	15 days	✓	20-Feb-2025	193 days	15 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA2506-A-7	E444	18-Feb-2025	20-Feb-2025	193 days	15 days	✓	20-Feb-2025	193 days	15 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) BA2506-A-8	E444	18-Feb-2025	20-Feb-2025	193 days	15 days	✓	20-Feb-2025	193 days	15 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA2506-A-9	E444	18-Feb-2025	20-Feb-2025	193 days	15 days	✓	20-Feb-2025	193 days	15 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA2506-A-1	EPP444	05-Feb-2025	18-Feb-2025	----	----		----	28 days	13 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA2506-A-10	EPP444	05-Feb-2025	18-Feb-2025	----	----		----	28 days	13 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA2506-A-11	EPP444	05-Feb-2025	18-Feb-2025	----	----		----	28 days	13 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA2506-A-12	EPP444	05-Feb-2025	18-Feb-2025	----	----		----	28 days	13 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA2506-A-2	EPP444	05-Feb-2025	18-Feb-2025	----	----		----	28 days	13 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA2506-A-3	EPP444	05-Feb-2025	18-Feb-2025	----	----		----	28 days	13 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA2506-A-4	EPP444	05-Feb-2025	18-Feb-2025	----	----		----	28 days	13 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) BA2506-A-5	EPP444	05-Feb-2025	18-Feb-2025	----	----		----	28 days	13 days	✔
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA2506-A-6	EPP444	05-Feb-2025	18-Feb-2025	----	----		----	28 days	13 days	✔
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA2506-A-7	EPP444	05-Feb-2025	18-Feb-2025	----	----		----	28 days	13 days	✔
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA2506-A-8	EPP444	05-Feb-2025	18-Feb-2025	----	----		----	28 days	13 days	✔
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA2506-A-9	EPP444	05-Feb-2025	18-Feb-2025	----	----		----	28 days	13 days	✔

Legend & Qualifier Definitions

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



Quality Control Parameter Frequency Compliance

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

Matrix: **Soil/Solid**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Laboratory Duplicates (DUP)							
pH by Meter (1:2 Soil:Water Extraction)	E108	1878097	1	12	8.3	5.0	✔
Moisture Content by Gravimetry	E144	1878098	1	12	8.3	5.0	✔
Metals in Soil/Solid by CRC ICPMS	E440	1878096	1	12	8.3	5.0	✔
Metals by CRC ICPMS (TCLP)	E444	1880347	1	12	8.3	5.0	✔
Mercury in Soil/Solid by CVAAS	E510	1878095	1	12	8.3	5.0	✔
Mercury by CVAAS (TCLP)	E512	1880346	1	12	8.3	5.0	✔
Laboratory Control Samples (LCS)							
pH by Meter (1:2 Soil:Water Extraction)	E108	1878097	1	12	8.3	5.0	✔
Moisture Content by Gravimetry	E144	1878098	1	12	8.3	5.0	✔
Metals in Soil/Solid by CRC ICPMS	E440	1878096	2	12	16.6	10.0	✔
Mercury in Soil/Solid by CVAAS	E510	1878095	2	12	16.6	10.0	✔
Method Blanks (MB)							
Moisture Content by Gravimetry	E144	1878098	1	12	8.3	5.0	✔
Metals in Soil/Solid by CRC ICPMS	E440	1878096	1	12	8.3	5.0	✔
Metals by CRC ICPMS (TCLP)	E444	1880347	1	12	8.3	5.0	✔
Mercury in Soil/Solid by CVAAS	E510	1878095	1	12	8.3	5.0	✔
Mercury by CVAAS (TCLP)	E512	1880346	1	12	8.3	5.0	✔
Matrix Spikes (MS)							
Metals by CRC ICPMS (TCLP)	E444	1880347	1	12	8.3	5.0	✔
Mercury by CVAAS (TCLP)	E512	1880346	1	12	8.3	5.0	✔



Methodology References and Summaries

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

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

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Work Order : VA25A3327
Client : Reworld Renewable Burnaby, ULC
Project : ----



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

QUALITY CONTROL REPORT

Work Order	: VA25A3327	Page	: 1 of 12
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	: ----	Date Samples Received	: 14-Feb-2025 11:00
PO	: ----	Date Analysis Commenced	: 18-Feb-2025
C-O-C number	: ----	Issue Date	: 20-Feb-2025 22:50
Sampler	: ----		
Site	: ----		
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
Robin Weeks	Team Leader - Metals	Vancouver Metals, Burnaby, British Columbia

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Work Order : VA25A3327
Client : Reworld Renewable Burnaby, ULC
Project : ----



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: 1878097)											
VA25A3327-001	BA2506-A-1	pH (1:2 soil:water)	----	E108	0.10	pH units	11.8	11.7	0.3%	5%	----
Physical Tests (QC Lot: 1878098)											
VA25A3327-001	BA2506-A-1	Moisture	----	E144	0.25	%	23.8	23.7	0.534%	20%	----
Metals (QC Lot: 1878095)											
VA25A3327-001	BA2506-A-1	Mercury	7439-97-6	E510	0.0500	mg/kg	0.255	0.227	0.0277	Diff <2x LOR	----
Metals (QC Lot: 1878096)											
VA25A3327-001	BA2506-A-1	Aluminum	7429-90-5	E440	50	mg/kg	33800	40000	16.8%	40%	----
		Antimony	7440-36-0	E440	0.10	mg/kg	92.5	91.9	0.692%	30%	----
		Arsenic	7440-38-2	E440	0.10	mg/kg	18.2	14.2	24.8%	30%	----
		Barium	7440-39-3	E440	0.50	mg/kg	596	777	26.4%	40%	----
		Beryllium	7440-41-7	E440	0.10	mg/kg	0.45	0.44	0.02	Diff <2x LOR	----
		Bismuth	7440-69-9	E440	0.20	mg/kg	8.39	6.90	19.4%	30%	----
		Boron	7440-42-8	E440	5.0	mg/kg	233	177	27.2%	30%	----
		Cadmium	7440-43-9	E440	0.020	mg/kg	9.06	6.14	38.4%	30%	DUP-H
		Calcium	7440-70-2	E440	50	mg/kg	132000	122000	7.52%	30%	----
		Chromium	7440-47-3	E440	0.50	mg/kg	281	190	38.5%	30%	DUP-H
		Cobalt	7440-48-4	E440	0.10	mg/kg	103	46.5	75.3%	30%	DUP-H
		Copper	7440-50-8	E440	0.50	mg/kg	9000	2340	117%	30%	DUP-H
		Iron	7439-89-6	E440	50	mg/kg	76800	79900	4.00%	30%	----
		Lead	7439-92-1	E440	0.50	mg/kg	295	430	37.2%	40%	----
		Lithium	7439-93-2	E440	2.0	mg/kg	52.4	34.3	41.8%	30%	DUP-H
		Magnesium	7439-95-4	E440	20	mg/kg	10600	11600	9.28%	30%	----
		Manganese	7439-96-5	E440	1.0	mg/kg	816	933	13.4%	30%	----
		Molybdenum	7439-98-7	E440	0.10	mg/kg	18.3	20.0	9.21%	40%	----
		Nickel	7440-02-0	E440	0.50	mg/kg	214	688	105%	30%	DUP-H
		Phosphorus	7723-14-0	E440	50	mg/kg	11800	9310	24.0%	30%	----
		Potassium	7440-09-7	E440	100	mg/kg	4140	4600	10.6%	40%	----
		Selenium	7782-49-2	E440	0.20	mg/kg	0.37	0.27	0.10	Diff <2x LOR	----
		Silver	7440-22-4	E440	0.10	mg/kg	4.94	3.55	32.9%	40%	----
		Sodium	7440-23-5	E440	50	mg/kg	15400	15800	2.44%	40%	----



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: 1878096) - continued											
VA25A3327-001	BA2506-A-1	Strontium	7440-24-6	E440	0.50	mg/kg	265	252	4.90%	40%	----
		Sulfur	7704-34-9	E440	1000	mg/kg	10100	8700	14.8%	30%	----
		Thallium	7440-28-0	E440	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Tin	7440-31-5	E440	2.0	mg/kg	172	114	40.5%	40%	DUP-H
		Titanium	7440-32-6	E440	1.0	mg/kg	335	264	23.5%	40%	----
		Tungsten	7440-33-7	E440	0.50	mg/kg	22.3	19.6	13.2%	30%	----
		Uranium	7440-61-1	E440	0.050	mg/kg	1.68	1.87	10.8%	30%	----
		Vanadium	7440-62-2	E440	0.20	mg/kg	34.1	38.8	12.7%	30%	----
		Zinc	7440-66-6	E440	2.0	mg/kg	7060	7060	0.0530%	30%	----
		Zirconium	7440-67-7	E440	1.0	mg/kg	2.1	3.1	1.0	Diff <2x LOR	----
TCLP Metals (QC Lot: 1880346)											
VA25A3327-001	BA2506-A-1	Mercury, TCLP	7439-97-6	E512	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
TCLP Metals (QC Lot: 1880347)											
VA25A3327-001	BA2506-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	1.80	1.76	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	1760	1710	3.20%	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	0.399	0.394	1.30%	30%	----
		Copper, TCLP	7440-50-8	E444	0.050	mg/L	0.688	0.658	4.45%	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	113	108	5.01%	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	1.16	1.15	0.010	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
Physical Tests (QCLot: 1878098)						
Moisture	----	E144	0.25	%	<0.25	----
Metals (QCLot: 1878095)						
Mercury	7439-97-6	E510	0.005	mg/kg	<0.0050	----
Metals (QCLot: 1878096)						
Aluminum	7429-90-5	E440	50	mg/kg	<50	----
Antimony	7440-36-0	E440	0.1	mg/kg	<0.10	----
Arsenic	7440-38-2	E440	0.1	mg/kg	<0.10	----
Barium	7440-39-3	E440	0.5	mg/kg	<0.50	----
Beryllium	7440-41-7	E440	0.1	mg/kg	<0.10	----
Bismuth	7440-69-9	E440	0.2	mg/kg	<0.20	----
Boron	7440-42-8	E440	5	mg/kg	<5.0	----
Cadmium	7440-43-9	E440	0.02	mg/kg	<0.020	----
Calcium	7440-70-2	E440	50	mg/kg	<50	----
Chromium	7440-47-3	E440	0.5	mg/kg	<0.50	----
Cobalt	7440-48-4	E440	0.1	mg/kg	<0.10	----
Copper	7440-50-8	E440	0.5	mg/kg	<0.50	----
Iron	7439-89-6	E440	50	mg/kg	<50	----
Lead	7439-92-1	E440	0.5	mg/kg	<0.50	----
Lithium	7439-93-2	E440	2	mg/kg	<2.0	----
Magnesium	7439-95-4	E440	20	mg/kg	<20	----
Manganese	7439-96-5	E440	1	mg/kg	<1.0	----
Molybdenum	7439-98-7	E440	0.1	mg/kg	<0.10	----
Nickel	7440-02-0	E440	0.5	mg/kg	<0.50	----
Phosphorus	7723-14-0	E440	50	mg/kg	<50	----
Potassium	7440-09-7	E440	100	mg/kg	<100	----
Selenium	7782-49-2	E440	0.2	mg/kg	<0.20	----
Silver	7440-22-4	E440	0.1	mg/kg	<0.10	----
Sodium	7440-23-5	E440	50	mg/kg	<50	----
Strontium	7440-24-6	E440	0.5	mg/kg	<0.50	----
Sulfur	7704-34-9	E440	1000	mg/kg	<1000	----
Thallium	7440-28-0	E440	0.05	mg/kg	<0.050	----
Tin	7440-31-5	E440	2	mg/kg	<2.0	----



Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Metals (QCLot: 1878096) - continued						
Titanium	7440-32-6	E440	1	mg/kg	<1.0	----
Tungsten	7440-33-7	E440	0.5	mg/kg	<0.50	----
Uranium	7440-61-1	E440	0.05	mg/kg	<0.050	----
Vanadium	7440-62-2	E440	0.2	mg/kg	<0.20	----
Zinc	7440-66-6	E440	2	mg/kg	<2.0	----
Zirconium	7440-67-7	E440	1	mg/kg	<1.0	----
TCLP Metals (QCLot: 1880346)						
Mercury, TCLP	7439-97-6	E512	0.001	mg/L	<0.0010	----
TCLP Metals (QCLot: 1880347)						
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: 1878097)									
pH (1:2 soil:water)	----	E108	----	pH units	6 pH units	101	95.0	105	----
Physical Tests (QCLot: 1878098)									
Moisture	----	E144	0.25	%	50 %	100	90.0	110	----
Metals (QCLot: 1878095)									
Mercury	7439-97-6	E510	0.005	mg/kg	0.1 mg/kg	98.3	80.0	120	----
Metals (QCLot: 1878096)									
Aluminum	7429-90-5	E440	50	mg/kg	200 mg/kg	101	80.0	120	----
Antimony	7440-36-0	E440	0.1	mg/kg	100 mg/kg	105	80.0	120	----
Arsenic	7440-38-2	E440	0.1	mg/kg	100 mg/kg	103	80.0	120	----
Barium	7440-39-3	E440	0.5	mg/kg	25 mg/kg	98.4	80.0	120	----
Beryllium	7440-41-7	E440	0.1	mg/kg	10 mg/kg	105	80.0	120	----
Bismuth	7440-69-9	E440	0.2	mg/kg	100 mg/kg	96.4	80.0	120	----
Boron	7440-42-8	E440	5	mg/kg	100 mg/kg	99.6	80.0	120	----
Cadmium	7440-43-9	E440	0.02	mg/kg	10 mg/kg	100	80.0	120	----
Calcium	7440-70-2	E440	50	mg/kg	5000 mg/kg	104	80.0	120	----
Chromium	7440-47-3	E440	0.5	mg/kg	25 mg/kg	99.8	80.0	120	----
Cobalt	7440-48-4	E440	0.1	mg/kg	25 mg/kg	97.6	80.0	120	----
Copper	7440-50-8	E440	0.5	mg/kg	25 mg/kg	97.9	80.0	120	----
Iron	7439-89-6	E440	50	mg/kg	100 mg/kg	103	80.0	120	----
Lead	7439-92-1	E440	0.5	mg/kg	50 mg/kg	98.6	80.0	120	----
Lithium	7439-93-2	E440	2	mg/kg	25 mg/kg	105	80.0	120	----
Magnesium	7439-95-4	E440	20	mg/kg	5000 mg/kg	103	80.0	120	----
Manganese	7439-96-5	E440	1	mg/kg	25 mg/kg	100	80.0	120	----
Molybdenum	7439-98-7	E440	0.1	mg/kg	25 mg/kg	104	80.0	120	----
Nickel	7440-02-0	E440	0.5	mg/kg	50 mg/kg	97.2	80.0	120	----
Phosphorus	7723-14-0	E440	50	mg/kg	1000 mg/kg	104	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	104	80.0	120	----
Silver	7440-22-4	E440	0.1	mg/kg	10 mg/kg	93.8	80.0	120	----
Sodium	7440-23-5	E440	50	mg/kg	5000 mg/kg	99.1	80.0	120	----
Strontium	7440-24-6	E440	0.5	mg/kg	25 mg/kg	105	80.0	120	----
Sulfur	7704-34-9	E440	1000	mg/kg	5000 mg/kg	99.1	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: 1878096) - continued									
Thallium	7440-28-0	E440	0.05	mg/kg	100 mg/kg	96.7	80.0	120	----
Tin	7440-31-5	E440	2	mg/kg	50 mg/kg	101	80.0	120	----
Titanium	7440-32-6	E440	1	mg/kg	25 mg/kg	98.5	80.0	120	----
Tungsten	7440-33-7	E440	0.5	mg/kg	10 mg/kg	96.9	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	102	80.0	120	----
Zinc	7440-66-6	E440	2	mg/kg	50 mg/kg	97.5	80.0	120	----
Zirconium	7440-67-7	E440	1	mg/kg	10 mg/kg	103	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: 1880346)										
VA25A3327-001	BA2506-A-1	Mercury, TCLP	7439-97-6	E512	0.0009 mg/L	0.001 mg/L	94.8	50.0	140	----
TCLP Metals (QCLot: 1880347)										
VA25A3327-001	BA2506-A-1	Antimony, TCLP	7440-36-0	E444	5.24 mg/L	5 mg/L	105	50.0	140	----
		Arsenic, TCLP	7440-38-2	E444	5.3 mg/L	5 mg/L	106	50.0	140	----
		Barium, TCLP	7440-39-3	E444	13.2 mg/L	12.5 mg/L	106	50.0	140	----
		Beryllium, TCLP	7440-41-7	E444	0.256 mg/L	0.25 mg/L	102	50.0	140	----
		Boron, TCLP	7440-42-8	E444	9.54 mg/L	10 mg/L	95.4	50.0	140	----
		Cadmium, TCLP	7440-43-9	E444	0.254 mg/L	0.25 mg/L	102	50.0	140	----
		Calcium, TCLP	7440-70-2	E444	ND mg/L	----	ND	50.0	140	----
		Chromium, TCLP	7440-47-3	E444	1.25 mg/L	1.25 mg/L	99.9	50.0	140	----
		Cobalt, TCLP	7440-48-4	E444	ND mg/L	----	ND	50.0	140	----
		Copper, TCLP	7440-50-8	E444	2.35 mg/L	2.5 mg/L	94.1	50.0	140	----
		Iron, TCLP	7439-89-6	E444	241 mg/L	250 mg/L	96.4	50.0	140	----
		Lead, TCLP	7439-92-1	E444	9.62 mg/L	10 mg/L	96.2	50.0	140	----
		Magnesium, TCLP	7439-95-4	E444	248 mg/L	250 mg/L	99.0	50.0	140	----
		Nickel, TCLP	7440-02-0	E444	2.45 mg/L	2.5 mg/L	98.1	50.0	140	----
		Selenium, TCLP	7782-49-2	E444	5.42 mg/L	5 mg/L	108	50.0	140	----
		Silver, TCLP	7440-22-4	E444	0.091 mg/L	0.1 mg/L	91.3	50.0	140	----
		Thallium, TCLP	7440-28-0	E444	4.8 mg/L	5 mg/L	97.1	50.0	140	----
		Uranium, TCLP	7440-61-1	E444	5.04 mg/L	5 mg/L	101	50.0	150	----
		Vanadium, TCLP	7440-62-2	E444	0.76 mg/L	0.75 mg/L	101	50.0	140	----
		Zinc, TCLP	7440-66-6	E444	9.65 mg/L	10 mg/L	96.5	50.0	140	----
		Zirconium, TCLP	7440-67-7	E444	0.7 mg/L	1 mg/L	73.9	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
							Low	High	
Laboratory sample ID	Reference Material ID	Analyte	CAS Number	Method					
Metals (QCLot: 1878095)									
QC-1878095-003	MRCA-21	Mercury	7439-97-6	E510	0.068 mg/kg	97.1	70.0	130	----
Metals (QCLot: 1878096)									
QC-1878096-003	MRCA-21	Aluminum	7429-90-5	E440	22500 mg/kg	101	70.0	130	----
QC-1878096-003	MRCA-21	Antimony	7440-36-0	E440	24.8 mg/kg	106	70.0	130	----
QC-1878096-003	MRCA-21	Arsenic	7440-38-2	E440	21.2 mg/kg	97.3	70.0	130	----
QC-1878096-003	MRCA-21	Barium	7440-39-3	E440	788 mg/kg	96.2	70.0	130	----
QC-1878096-003	MRCA-21	Beryllium	7440-41-7	E440	1.82 mg/kg	105	70.0	130	----
QC-1878096-003	MRCA-21	Bismuth	7440-69-9	E440	1.78 mg/kg	91.8	70.0	130	----
QC-1878096-003	MRCA-21	Cadmium	7440-43-9	E440	2.15 mg/kg	96.5	70.0	130	----
QC-1878096-003	MRCA-21	Calcium	7440-70-2	E440	4900 mg/kg	104	70.0	130	----
QC-1878096-003	MRCA-21	Chromium	7440-47-3	E440	56.9 mg/kg	99.1	70.0	130	----
QC-1878096-003	MRCA-21	Cobalt	7440-48-4	E440	32 mg/kg	97.2	70.0	130	----
QC-1878096-003	MRCA-21	Copper	7440-50-8	E440	969 mg/kg	96.2	70.0	130	----
QC-1878096-003	MRCA-21	Iron	7439-89-6	E440	32700 mg/kg	98.7	70.0	130	----
QC-1878096-003	MRCA-21	Lead	7439-92-1	E440	919 mg/kg	92.5	70.0	130	----
QC-1878096-003	MRCA-21	Lithium	7439-93-2	E440	47.3 mg/kg	114	70.0	130	----
QC-1878096-003	MRCA-21	Magnesium	7439-95-4	E440	7780 mg/kg	104	70.0	130	----
QC-1878096-003	MRCA-21	Manganese	7439-96-5	E440	8640 mg/kg	99.2	70.0	130	----
QC-1878096-003	MRCA-21	Molybdenum	7439-98-7	E440	25.1 mg/kg	99.2	70.0	130	----
QC-1878096-003	MRCA-21	Nickel	7440-02-0	E440	1000 mg/kg	94.9	70.0	130	----
QC-1878096-003	MRCA-21	Phosphorus	7723-14-0	E440	660 mg/kg	98.6	70.0	130	----
QC-1878096-003	MRCA-21	Potassium	7440-09-7	E440	10800 mg/kg	97.2	70.0	130	----
QC-1878096-003	MRCA-21	Selenium	7782-49-2	E440	1.04 mg/kg	98.6	60.0	140	----
QC-1878096-003	MRCA-21	Silver	7440-22-4	E440	8.98 mg/kg	95.4	70.0	130	----
QC-1878096-003	MRCA-21	Sodium	7440-23-5	E440	1770 mg/kg	102	70.0	130	----
QC-1878096-003	MRCA-21	Strontium	7440-24-6	E440	41 mg/kg	97.9	70.0	130	----
QC-1878096-003	MRCA-21	Sulfur	7704-34-9	E440	3940 mg/kg	94.3	50.0	150	----
QC-1878096-003	MRCA-21	Thallium	7440-28-0	E440	0.907 mg/kg	93.9	70.0	130	----
QC-1878096-003	MRCA-21	Tin	7440-31-5	E440	3.79 mg/kg	98.6	40.0	160	----
QC-1878096-003	MRCA-21	Titanium	7440-32-6	E440	2790 mg/kg	99.0	70.0	130	----
QC-1878096-003	MRCA-21	Tungsten	7440-33-7	E440	6.99 mg/kg	107	70.0	130	----
QC-1878096-003	MRCA-21	Uranium	7440-61-1	E440	3.97 mg/kg	99.1	70.0	130	----
QC-1878096-003	MRCA-21	Vanadium	7440-62-2	E440	66.2 mg/kg	98.9	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: 1878096) - continued									
QC-1878096-003	MRCA-21	Zinc	7440-66-6	E440	828 mg/kg	95.8	70.0	130	----
QC-1878096-003	MRCA-21	Zirconium	7440-67-7	E440	6.91 mg/kg	89.0	70.0	130	----



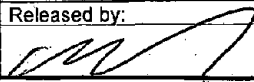
Chain of Custody / Analytical Request Form

Canada Toll Free: 1 800 668 9878

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COC # _____

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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			Email 3: dskrypnik@covanta.com			Analysis Request											
Fax: ☐ Yes / ☐ No			brent.kirkpatrick@metrovanvancouver.org														
			Sarah.Wellman@metrovanvancouver.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#														
Contact:			LSD: (includes 2:1 pH)														
Address:			Quote #:														
Phone:																	
Fax:																	
Lab/Work Order #			ALS Contact:			Sampler:									Number of Containers		
(lab use only)																	
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)							
BA2506-A-1		Environmental Division Vancouver Work Order Reference VA25A3327  Telephone: +1 604 263 4188		05-Feb-25	9:00	Soil	X	X			X					1	
BA2506-A-2				05-Feb-25	9:00	Soil	X	X			X					1	
BA2506-A-3				05-Feb-25	9:00	Soil	X	X			X					1	
BA2506-A-4				05-Feb-25	9:00	Soil	X	X			X					1	
BA2506-A-5				05-Feb-25	9:00	Soil	X	X			X					1	
BA2506-A-6				05-Feb-25	9:00	Soil	X	X			X					1	
BA2506-A-7				05-Feb-25	9:00	Soil	X	X			X					1	
BA2506-A-8				05-Feb-25	9:00	Soil	X	X			X					1	
BA2506-A-9				05-Feb-25	9:00	Soil	X	X			X					1	
BA2506-A-10				05-Feb-25	9:00	Soil	X	X			X					1	
BA2506-A-11				05-Feb-25	9:00	Soil	X	X			X					1	
BA2506-A-12				05-Feb-25	9:00	Soil	X	X			X					1	
Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details																	
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:	Time:	Temperature:	Verified by:	Date:	Time:	Observations:								
	13-Feb-25	0800	NO Icepk	11:00am	20 °C				Yes / No ?								
										If Yes add SIF							
GENF 20.00 Front																	