Appendix L

2024 Supplemental Site Investigation (SSI)

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1.0 Background

As discussed in Section 2.3.6 of the HHERA report herein, the initial draft HHERA (Dillon, 2023) made several recommendations to help address uncertainties in the risk assessment. As part of an iterative risk assessment approach, Dillon conducted a supplemental site investigation (SSI) in April to July of 2024, and relevant data collected were used to reduce uncertainty and refine the initial risk assessment results. The SSI included additional surface water and sediment sampling in the watercourses and wetlands on site, vegetation sampling in Wetland #3, as well as additional sediment, benthic community, aquatic vegetation, and bivalve tissue sampling in Lake Enon.

The data from the 2024 SSI has been incorporated into the HHERA where appropriate. Sediment and surface water data from the 2024 program are provided in the analytical summary tables (Appendix E) while benthic community, aquatic vegetation, and bivalve data are presented herein (Appendix L).

2.0 Benthic Community Investigation

2.1 Methods

Benthic sampling was conducted by Envirosphere Consultants Limited (Envirosphere) on May 28, 2024. At lake sites, a 15 cm x 15 cm Ekman grab operated by a SCUBA diver was used to collect the benthic samples while a 30.5 cm x 30.5 cm Surber sampler was used at watercourse sites (Envirosphere, 2024). General water chemistry (i.e., pH, temperature, dissolved oxygen, and specific conductivity) was collected at each sampling location using an YSI Model 85 handheld oxygen meter and a handheld pH pen while a water sample was taken for total suspended solids (TSS) analysis. Site physical characteristics (i.e., substrate, cover, bank type, width, depth, etc.) were also collected at each sampling site where applicable. Samples were preserved with 100% isopropanol and diluted to approximately 70% with water from the site (Envirosphere, 2024). Sorting was also completed by Envirosphere at their lab. Methods are further detailed in the report provided by Envirosphere (appended).

A total of 12 lake sites were selected for benthic sampling (Figure L1). Three sites in Lake Enon, located furthest from the mining site, were chosen as far-field sites (INV-01 to INV-03). The remaining nine sites in Lake Enon were selected as exposure (near-field) sites (INV-04 to INV-12) and were located closer to the mine and its potential outflow. Three watercourse sites (WC1 to WC-3) were also sampled.

Following enumeration and taxonomic identification, benthic community health indices were calculated by Envirosphere for each sample site. Indices calculated include:

- EPT ratio (ratio of abundance of mayflies (Ephemeroptera), stoneflies (Plecoptera), and caddisflies (Trichoptera), to total numbers of organisms);
- Total Abundance (number of animals in the sample);
- Taxon Richness (number of taxa per sample); and
- Hilsenhoff Biotic Index (HBI) (an estimate of overall tolerance of the community in a sample area, weighted by the relative abundance of each taxonomic group) (Envirosphere, 2024).

To compare between sites, Envirosphere completed a Cluster Analysis using the Bray-Curtis Similarity Index (BCSI). The sites were grouped together based on their relative measure of similarity as determined by the BCSI. The BCSI compares the samples based on the lesser abundance of taxonomic groups that occur at both sample sites and the total abundance of all taxonomic groups (Envirosphere, 2024). The BCSI is calculated by the following formula:

$$BCij = 2Cij / Si + Sj$$

Where:
Cij = the sum of the lesser values for only those species in common between both sites; and
Si and Sj = the total number of specimens counted at both sites.

To normalize the biological abundance data, a ln (x+1) transformation was applied prior to the similarity analysis (Envirosphere, 2024). Summary statistic methods are further detailed in the report provided by Envirosphere (appended).

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LAKE ENON FORMER MILL SITE HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT

LAKE ENON AND ON-SITE WATERCOURSE SEDIMENT, SURFACE WATER, AQUATIC VEGETATION, BENTHIC COMMUNITY, AND BIVALVE SAMPLE LOCATIONS

FIGURE L1

- STUDY BOUNDARY
- ASSESSMENT PROPERTIES
- PROPERTY LINE
- BERM
- DRAINAGE DITCH
- WATERCOURSE
- SPILL POINT
- CULVERT
- VERTICAL DRAIN
- STEEP SLOPE
- SURFACE DEPRESSION
- AECs (AREA OF ENVIRONMENTAL CONCERN)
- HISTORICAL SEDIMENT AND/OR SURFACE WATER SAMPLE LOCATION
- SEDIMENT AND/OR SURFACE WATER SAMPLE LOCATION (2024)

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SCALE 1:5,000 METRES

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MAP/DRAWING INFORMATION
GeoNOVA Civic Address Finder, Nova Scotia Property Online and Bing Maps. Property lines are approximate only. This is not a legal survey.

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CHECKED BY: NJW
DESIGNED BY: RJE

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DILLON CONSULTING

PROJECT: 22-3723
DATE: DECEMBER 2024

2.2 Results

Based on the results of the cluster analysis (Figure L2), the benthic communities between the watercourse and lake sample sites were the least similar in terms of taxonomic group abundance. WC-1 had the least similarity with just over 20% when compared to all other samples, while WC-2 and WC-3 had just over 30% similarity with the lake sampling sites. Even between WC-2 and WC-3, the benthic communities had just over 40% similarity.

All three watercourse sites had sediment samples with metal exceedances (Table L1) however the HBI results suggest fair (WC-2) to good (WC-1 and WC-2) water quality. It should be noted that the HBI was designed as a measure of organic stream pollution and tolerance values for each taxon were based on their tolerance to low oxygen environments (Hilsenhoff, 1987), rather than metals concentrations in sediments. However, HBI scores can still reflect overall tolerance to stressors for benthic taxa.

Between the three watercourse sites, there was no clear trend based on the benthic indices. WC-1 and WC-2 had similar abundances while WC-3 had the lowest abundance, but the highest taxa richness (Table L1). WC-2 had the highest EPT ratio while WC-1 had a low EPT ratio, similar to WC-3, even though the habitat at WC-1 contained habitat features (i.e., high dissolved oxygen, riffles and gravel dominated substrate) preferred by members of these families, similar to WC-2. In comparison, the habitat at WC-3 was silt dominant and had low dissolved oxygen levels. Given the metal exceedances at the watercourse sites (and exceedances in the watercourses were generally similar), the difference in benthic community similarity between the watercourse sites may be due to biophysical factors at each sampling site, rather than metals contamination, such as: proximity or connectivity to Lake Enon predation, substrate types, or the general stochastic nature of ecological communities. Furthermore, the comparisons are currently being drawn from a single sampling event and are not based on long-term data.

The lake samples were separated into two groups (A and B) based on the similarity results, with group B separated further into sub-groups (Figure L2). The communities between groups A and B had approximately 50% similarity. Within group A, INV-6 had just over 60% similarity with INV-3 and INV-10 while INV-3 and INV-10 had a similarity of 82%. INV-1 was the least similar community in Group B with approximately 55% similarity to the rest of the group. The rest of the subgroups in Group B had similarities between 69% and 74%. It should be noted that the far-field samples, INV-1 to INV-3, were more similar to different near-field sites than to each other. The HBI scores for the lake samples suggest fairly poor water quality at all sites except for INV-07 (which is located to the south of the lake and close to the former mine site) which had fair water quality. The EPT ratios were relatively low within the lake sites ranging from 0% to 8.3%, which is expected as EPT presence is more common in flowing waters (e.g., streams) than in lentic environments.

Similar to the watercourse sites, the sediment samples within the lake sites all had metal exceedances (Table L1). However, there does not appear to be a strong correlation between contamination levels and benthic community. For example, INV-06 had the fewest sediment quality guideline exceedances and

lowest margins of exceedance (i.e., lead, silver, and zinc), but also had the lowest abundance and taxa richness. Benthic indices are inherently highly variable, and since only one sample was taken at each site it is difficult to draw a meaningful conclusion based on the current data. Additional monitoring would provide a better understanding of the benthic community assemblages over time.

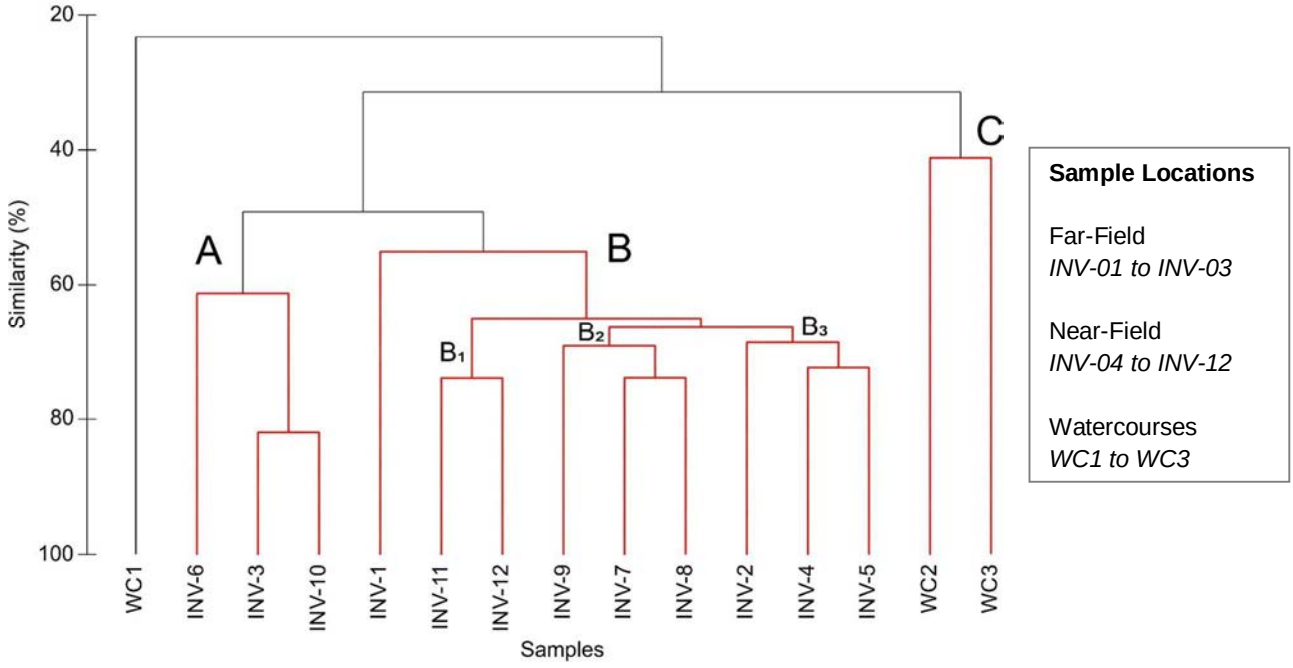


Figure L2: Similarity of benthic invertebrate communities in Lake Enon and associated watercourses based on Bray-Curtis Index of Similarity (Envirosphere, 2024).

Table L1: Summary of Benthic and Sediment Sampling Results

		Lake Enon (mg/kg)												Watercourse (mg/kg)		
		SED 27	SED 28	SED 29	SED 36	SED 37	SED 38	SED 39	SED 40	SED 41	SED 42	SED 43	SED 44	WC1	WC2	WC3
		INV01	INV02	INV03	INV04	INV05	INV06	INV07	INV08	INV09	INV10	INV11	INV12	WC1	WC2	WC3
Benthic Community Metric		Benthic Community Results														
Abundance (# / m^2)		4484.4	5505.6	3640.8	3152.4	6882	976.8	6438	6793.2	17138.4	6837.6	4795.2	4839.6	3872	3278	1903
Taxa Richness		6	12	6	9	14	5	11	9	14	7	11	10	12	9	14
Total EPT : Total (%)[a]		0.0	2.4	1.2	4.2	6.5	0.0	6.9	2.6	1.8	1.9	5.6	8.3	8.0	62.4	4.0
HBI (based on family)[b]		5.98	6.40	6.06	5.79	6.00	6.14	5.72	5.97	6.10	5.99	5.94	5.83	4.50	4.50	5.50
Parameter	$SedQG_E$[c]	Sediment Exceedances (mg/kg)														
Arsenic	17.0 [d]	8.7	8.7	8.5	7.2	5.8	3.8	8.3	7.1	7	8.9	6.5	8.5	6.7	21	7.2
Cadmium	3.5 [d]	5.7	8.4	5.2	6.7	6.7	3.2	2.8	7.2	5.7	7	4.3	6.2	2.4	2	4.4
Lead	91.3 [d]	220	210	220	180	210	130	770	790	490	540	270	290	170	150	270
Manganese	1100 [e]	6,900	23,000	1,500	1,300	6,400	620	4,400	1,300	14,000	2,000	7,900	1,200	2,300	3,000	1,700
Selenium	2.0 [f]	1.4	1.6	2.2	1.6	0.82	0.59	1.6	1.2	1.3	1.3	1.1	2	*<0.50*	0.69	1.1
Silver	0.5 [e]	0.85	0.97	1.3	0.96	0.69	0.64	1.4	1.3	1.1	1.6	0.76	1.2	0.71	*<0.50*	1.6
Zinc	315 [d]	580	640	660	580	470	370	590	1000	760	1300	540	730	480	560	840

Notes

Shaded cells indicate an exceedance over the applicable guideline.

[a] Ratio of abundance of mayflies (Ephemeroptera), stoneflies (Plecoptera), and caddisflies (Trichoptera), to total numbers of organisms.

[b] Hilsenhoff Biotic Index.

[c] $SedQG_E$: Ecological Health-Based Sediment Quality Guideline. Where applicable, guidelines taken from Nova Scotia Tier II Pathway-Specific Standards for Sediment - Freshwater, Table 4. The original source is indicated below.

[d] CCME Canadian Sediment Quality Guidelines for the protection of freshwater aquatic life; Probable Effect Levels (PEL).

[e] BC MECCS (2021) British Columbia Working Sediment Quality Guidelines. Upper SWQG for freshwater aquatic life - Table 2.

[f] BC MECCS (2023) British Columbia Approved Water Quality Guidelines for Aquatic Life (selenium, Table 36).

2.3 Conclusions

Abundance, taxon richness, EPT ratio, HBI and the Bray-Curtis Index of similarity were evaluated for the benthic community samples collected during the 2024 SSI from Lake Enon and the site watercourses. There was not a strong correlation reported between sediment contamination in Lake Enon or the site watercourses and the benthic community indices calculated. As such, factors other than sediment contamination, such as substrate type, predation, connectivity, and general ecological variability may be contributing to differences observed between the benthic community assemblages in the samples collected.

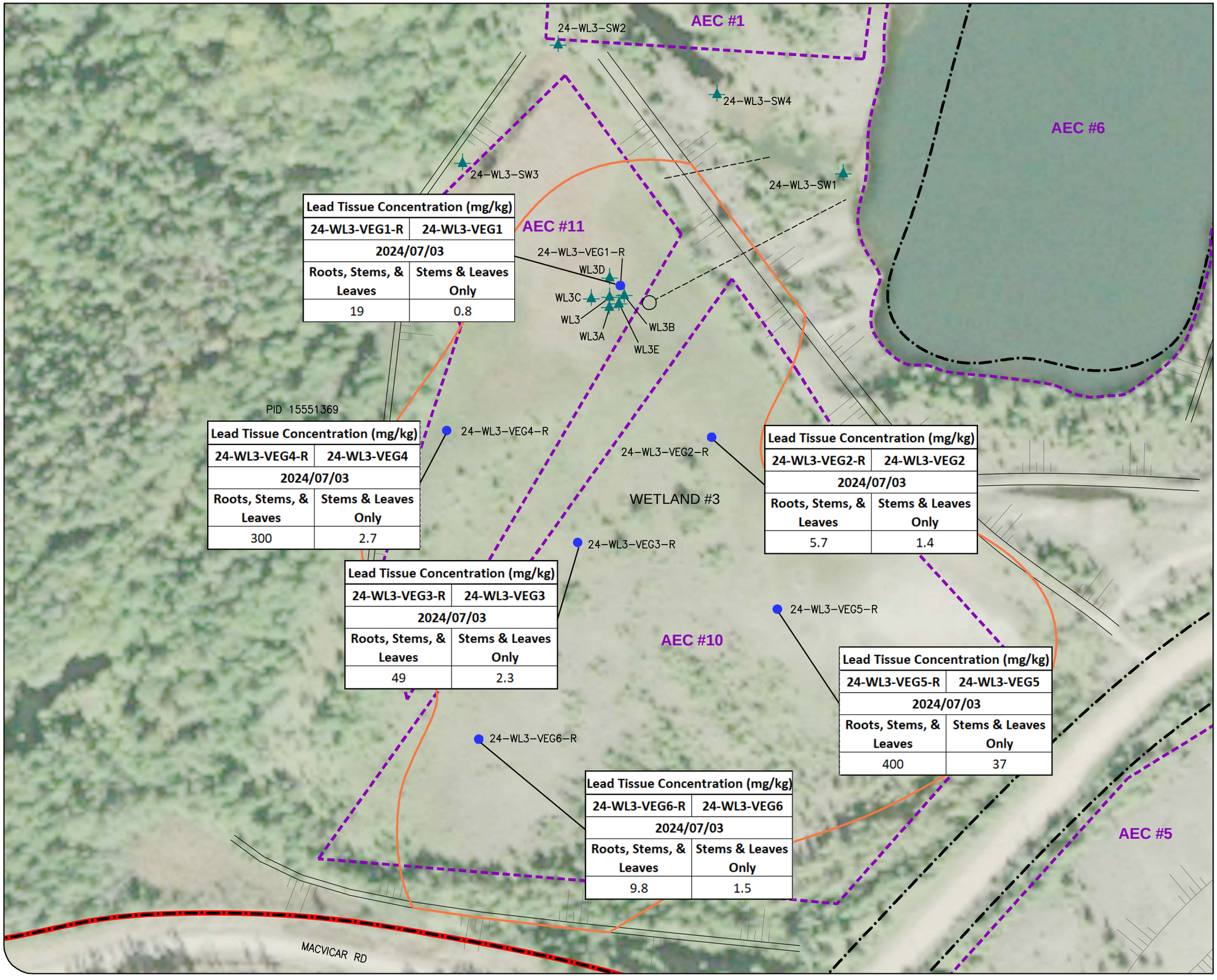
3.0 Wetland #3 **Vegetation Investigation**

3.1 Methods

As part of Change Order No. 8 under the Natural Cap Feasibility Study Wetland Quality Assessment, Dillon included metals analysis of six vegetation samples collected from what is denoted as Wetland #3 (Figure L3). Between July 3 and 4, 2024, six vegetation samples (24-WL3-VEG1-R to 24-WL3-VEG6-R) were collected from Wetland #3 in duplicate. These vegetation samples were collected from areas within Wetland #3 that had (or were inferred to have) soil lead concentrations exceeding the human health SSTL for lead in soils of 2100 mg/kg (although no paired soil samples were collected at the time of the vegetation tissue sampling). While not specifically identified as a sampling need in the initial ERA, these vegetation data are considered herein as an additional line of evidence for the ERA.

The initial vegetation sample included the full plant (roots, stem, and leaves), with a duplicate sample collected that only included the stem and leaves (no roots). The duplicate sample was frozen and placed on hold while the full plant sample was analyzed for metals. As the analytical results for the full plant analysis indicated some higher metals concentrations (e.g., lead and strontium), the duplicate samples (stem and leaves only) were analyzed to evaluate the difference in metals concentrations, as any consumption of plant material by ecological receptors would likely only include the stem and leaves.

The vegetation samples were collected with a shovel and placed directly into laboratory-provided sample bags. To minimize the potential for cross contamination, the shovel was cleaned with Alconox and water between sample locations. Samples were placed into coolers containing ice for transport to Bureau Veritas Labs in Sydney, Nova Scotia for metals analysis.



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LAKE ENON FORMER MILL SITE WETLAND #3 INVESTIGATION (2024)

WETLAND VEGETATION SAMPLE LOCATIONS AND LEAD CONCENTRATIONS

FIGURE L3

- STUDY BOUNDARY
- ASSESSMENT PROPERTIES
- BERM
- DRAINAGE DITCH
- WATERCOURSE
- CULVERT
- VERTICAL DRAIN
- STEEP SLOPE
- AECs (AREA OF ENVIRONMENTAL CONCERN)
- 2100mg/kg LEAD IN SOIL AND SEDIMENT
- SEDIMENT AND/OR SURFACE WATER SAMPLE LOCATION
- VEGETATION EXTRACTABLE LEAD LOCATIONS

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GeoNOVA Civic Address Finder, Nova Scotia Property Online and Bing Maps. Property lines are approximate only. This is not a legal survey.

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PROJECT: 22-3723
DATE: NOVEMBER 2024

3.2 Results

As shown in Table L2, concentrations of COPCs in stem and leaf tissue only from wetland vegetation were consistently lower than those found in the entire plant (which included roots), with the exception of strontium. Given that wildlife at the site that would potentially feed in the wetland areas are most likely to ingest only the stems and leaves of the wetland plant, the stems and leaves concentrations are most relevant to consider when examining potential exposures to ecological receptors in the ERA.

As shown in Figure L3, lead concentrations in wetland vegetation roots, stems, and leaves were greater than in the stems and leaves only, suggesting that lead appears to preferentially partition to roots. Lead concentrations in stem and leaf samples ranged from 0.8 mg/kg (sample 24-WL3-VEG1) to 37 mg/kg (sample 24-WL3-VEG5), with a mean concentration of 7.6 mg/kg. Five of the six analytical results for lead in stems and leaves collected from within Wetland #3 were below the estimated vegetation tissue concentration used in the food chain modeling for the ERA (i.e., 4.4 mg/kg). Wetland #3 vegetation tissue samples were collected in areas of the site where lead soil / sediment concentrations were elevated; thus, vegetation sampled in this part of the site would be expected to have higher lead concentrations than vegetation elsewhere on the site. Given the analytical results of lead in vegetation tissue, the modelled concentrations in the ERA are an accurate, but conservative, estimate.

3.3 Conclusions

Given that the Wetland #3 vegetation samples were collected in areas of the site having elevated lead concentrations that were recommended for risk management (in the HHRA), and also considering that Wetland #3 represents only a small portion of the total site area, and that measured vegetation tissue concentrations from Wetland #3 were generally similar to the values applied in the ERA food chain modelling (i.e., 0.8 to 37 mg/kg, with an average concentration of 7.6 mg/kg), it is likely that that actual lead exposures for terrestrial and avian receptors feeding within terrestrial / wetland areas of the site would be less than estimated in the ERA modelling. Therefore, outcomes of the ERA modelling are considered to be reasonably accurate and protective of the ecological receptors that were assessed, given consideration of the Wetland #3 vegetation data.

Table L2: Wetland Vegetation Tissue COPC Concentrations

		Sample ID	24-WL3-VEG1-R	24-WL3-VEG1	24-WL3-VEG2-R	24-WL3-VEG2	24-WL3-VEG3-R	24-WL3-VEG3	24-WL3-VEG4-R	24-WL3-VEG4	24-WL3-VEG5-R	24-WL3-VEG5	24-WL3-VEG6-R	24-WL3-VEG6
		Sampling Date	2024/07/03		2024/07/03		2024/07/03		2024/07/03		2024/07/03		2024/07/03	
		Description[1]	RSL	SL	RSL	SL	RSL	SL	RSL	SL	RSL	SL	RSL	SL
Metals	UNITS	RDL[2]												
Acid Extractable Cadmium (Cd)	mg/kg	0.3	*<0.30*	*<0.30*	0.37	0.39	0.54	0.84	0.77	*<0.30*	0.61	0.5	*<0.30*	*<0.30*
Acid Extractable Lead (Pb)	mg/kg	0.5	19	0.8	5.7	1.4	49	2.3	300	2.7	400	37	9.8	1.5
Acid Extractable Strontium (Sr)	mg/kg	5	1600	2700	2400	2800	94	250	660	790	540	630	440	520
Acid Extractable Vanadium (V)	mg/kg	2	*<2.0*	*<2.0*	*<2.0*	*<2.0*	*<2.0*	*<2.0*	*<2.0*	*<2.0*	*<2.0*	*<2.0*	*<2.0*	*<2.0*
Acid Extractable Zinc (Zn)	mg/kg	5	24	21	90	80	65	55	63	20	35	37	36	56

Notes

[1] RSL = Roots, Stems, & Leaves; SL = Stems & Leaves Only.

[2] RDL = Reportable Detection Limit.

4.0 Aquatic Vegetation and Bivalve Investigation

4.1 Methods

A total of three far-field samples and nine near-field samples were collected in Lake Enon for both aquatic vegetation and bivalves. Paired sediment samples were also collected at these sampling locations (or if a recent sediment result was available for the vegetation or bivalve sampling, that sample was assumed to represent the paired sediment concentration). All collected samples were analyzed for metals. Aquatic vegetation and bivalve tissue analytical data were evaluated by comparing the near-field and far-field concentrations of COPCs identified for sediments in Lake Enon in addition to available paired sediment data analytical results (Figure L1). Quantitative statistical analysis could not be conducted due to the limited number of samples collected; however, reported concentrations were assessed and are discussed herein.

4.2 Results

Table L3 presents all aquatic vegetation tissue data organized by location (near-field and far-field). Table L4 presents all bivalve tissue data organized by location. Table L5 presents aquatic vegetation data alongside their corresponding sediment sample, and Table L6 presents bivalve tissue data alongside their corresponding sediment sample. Data are also represented visually in Figure L4, which shows the COPC concentrations in aquatic vegetation and bivalve tissue from Lake Enon, and Figures L5 through Figure L10 which show the paired sediment versus vegetation and bivalve tissue concentration relationships). Results are further discussed below.

4.2.1 Near-Field vs. Far-Field

4.2.1.1 Cadmium

Aquatic Vegetation

Cadmium was detected at concentrations above the laboratory RDL in 3/3 far-field aquatic vegetation samples (100%) at concentrations ranging from 2.2 mg/kg to 2.5 mg/kg, and in 9/9 near-field aquatic vegetation samples (100%) at concentrations ranging from 1.2 mg/kg to 5.5 mg/kg. Near-field cadmium concentrations were generally within the far-field concentration range with the exception of two samples, one of which was marginally above the far-field maximum (24-AV-06 at 2.7 mg/kg) and one of which was 2.2-fold over the far-field maximum (24-AV-05 at 5.5 mg/kg).

Bivalves

Cadmium was detected at concentrations above the laboratory RDL in 3/3 far-field bivalve samples (100%) at concentrations ranging from 2.1 mg/kg to 2.5 mg/kg, and in 9/9 near-field bivalve samples

(100%) at concentrations ranging from 1.6 mg/kg to 4.5 mg/kg. Near-field cadmium concentrations were generally within or marginally above the far-field concentration range for all samples.

4.2.1.2 Lead

Aquatic Vegetation

Lead was detected at concentrations above the laboratory RDL in 3/3 far-field aquatic vegetation samples (100%) at concentrations ranging from 17 mg/kg to 44 mg/kg, and in 9/9 near-field aquatic vegetation samples (100%) at concentrations ranging from 3.1 mg/kg to 150 mg/kg. Near-field lead concentrations were generally within the far-field concentration range with the exception of two samples, one of which was marginally above the far-field maximum (24-AV-04 at 48 mg/kg) and one of which was 3.4-fold over the far-field maximum (24-AV-05 at 150 mg/kg).

Bivalves

Lead was detected at concentrations above the laboratory RDL in 3/3 far-field bivalve samples (100%) at concentrations ranging from 1.6 mg/kg to 2.1 mg/kg, and in 9/9 near-field bivalve samples (100%) at concentrations ranging from 1.5 mg/kg to 4.0 mg/kg. Near-field lead concentrations were generally within or marginally above the far-field concentration range for all samples.

4.2.1.3 Selenium

Aquatic Vegetation

Selenium was not detected in any of the analyzed near-field or far-field aquatic vegetation samples.

Bivalves

Selenium was detected at concentrations above the laboratory RDL in 3/3 far-field bivalve samples (100%) at concentrations ranging from 0.8 mg/kg to 0.93 mg/kg, and in 9/9 near-field bivalve samples (100%) at concentrations ranging from 0.8 mg/kg to 1.2 mg/kg. Near-field selenium concentrations were generally within or marginally above the far-field concentration range for all samples.

4.2.1.4 Silver

Aquatic Vegetation

Silver was not detected in any of the analyzed near-field or far-field aquatic vegetation samples.

Bivalves

Silver was detected at concentrations above the laboratory RDL in 3/3 far-field bivalve samples (100%) at concentrations ranging from 0.98 mg/kg to 1.2 mg/kg, and in 9/9 near-field bivalve samples (100%) at

concentrations ranging from 0.63 mg/kg to 1.4 mg/kg. Near-field silver concentrations were generally within or marginally above the far-field concentration range for all samples.

4.2.1.5 Strontium

Aquatic Vegetation

Strontium was detected at concentrations above the laboratory RDL in 3/3 far-field aquatic vegetation samples (100%) at 1,500 mg/kg for all three samples, and in 9/9 near-field aquatic vegetation samples (100%) at concentrations ranging from 310 mg/kg to 1,500 mg/kg. Near-field strontium concentrations were all within the far-field concentration range.

Bivalves

Strontium was detected at concentrations above the laboratory RDL in 3/3 far-field bivalve samples (100%) at concentrations ranging from 230 mg/kg to 350 mg/kg, and in 9/9 near-field bivalve samples (100%) at concentrations ranging from 140 mg/kg to 450 mg/kg. Near-field strontium concentrations were generally within or marginally above the far-field concentration range for all samples.

4.2.1.6 Zinc

Aquatic Vegetation

Zinc was detected at concentrations above the laboratory RDL in 3/3 far-field aquatic vegetation samples (100%) at concentrations ranging from 190 mg/kg to 270 mg/kg, and in 9/9 near-field aquatic vegetation samples (100%) at concentrations ranging from 46 mg/kg to 390 mg/kg. Near-field zinc concentrations were generally within or marginally above the far-field concentration range for all samples.

Bivalves

Zinc was detected at concentrations above the laboratory RDL in 3/3 far-field bivalve samples (100%) at concentrations ranging from 17 mg/kg to 24 mg/kg, and in 9/9 near-field bivalve samples (100%) at concentrations ranging from 15 mg/kg to 33 mg/kg. Near-field zinc concentrations were generally within or marginally above the far-field concentration range for all samples.

Table L3: Metals Concentrations in Lake Enon Aquatic Vegetation

			Monitoring Zone	Far-Field			Summary - Far-Field Statistics						
			Field ID	24-AV-01	24-AV-02	24-AV-03	Number of Samples	Number of Non-Detects	Number of Detects	Minimum Concentration (µg/g)	Minimum Detect	Maximum Concentration (µg/g)	Maximum Detect
			Sample Material	Aquatic Vegetation	Aquatic Vegetation	Aquatic Vegetation							
			Date	28 May 2024	30 May 2024	30 May 2024							
Parameter	Unit	RDL											
Metals													
Aluminium	mg/kg	10.00		980	2,500	2,500	3	0	3	980	980	2500	2500
Antimony	mg/kg	2.0		<2.0	<2.0	<2.0	3	3	0	<2.0	-	<2.0	-
Arsenic	mg/kg	2.0		<2.0	<2.0	<2.0	3	3	0	<2.0	-	<2.0	-
Barium	mg/kg	5.00		200	350	470	3	0	3	200	200	470	470
Beryllium	mg/kg	2.0		<2.0	<2.0	<2.0	3	3	0	<2.0	-	<2.0	-
Boron	mg/kg	5.00		30	27	28	3	0	3	27	27	30	30
Cadmium	mg/kg	0.3		2.2	2.3	2.5	3	0	3	2.2	2.2	2.5	2.5
Chromium (Total, III+VI)	mg/kg	2.000		<2.0	3	2.9	3	1	2	<2.0	2.9	3	3
Cobalt	mg/kg	1.0		<1.0	1.5	1.5	3	1	2	<1.0	1.5	1.5	1.5
Copper	mg/kg	2.00		5.6	6.8	7.8	3	0	3	5.6	5.6	7.8	7.8
Iron	mg/kg	50.00		1,400	3,500	3,700	3	0	3	1400	1400	3700	3700
Lead	mg/kg	0.50		17	43	44	3	0	3	17	17	44	44
Manganese	mg/kg	2.00		1,500	3,200	3,900	3	0	3	1500	1500	3900	3900
Mercury	mg/kg	0.01		0.013	0.021	0.018	3	0	3	0.013	0.013	0.021	0.021
Molybdenum	mg/kg	2.000		<2.0	<2.0	<2.0	3	3	0	<2.0	-	<2.0	-
Nickel	mg/kg	2.0		<2.0	5	3.1	3	1	2	<2.0	3.1	5	5
Selenium	mg/kg	2.000		<2.0	<2.0	<2.0	3	3	0	<2.0	-	<2.0	-
Lithium	mg/kg	2.00		<2.0	2.9	2.2	3	1	2	<2.0	2.2	2.9	2.9
Silver	mg/kg	0.50		<0.50	<0.50	<0.50	3	3	0	<0.50	-	<0.50	-
Strontium	mg/kg	5.00		1,500	1,500	1,500	3	0	3	1500	1500	1500	1500
Thallium	mg/kg	0.10		<0.10	<0.10	0.12	3	2	1	<0.10	0.12	0.12	0.12
Uranium	mg/kg	0.10		0.39	0.63	0.78	3	0	3	0.39	0.39	0.78	0.78
Vanadium	mg/kg	2		2.6	5.1	4.9	3	0	3	2.6	2.6	5.1	5.1
Zinc	mg/kg	5		190	260	270	3	0	3	190	190	270	270

Notes

RDL = Reportable Detection Limit

Table L3: Metals Concentrations in Lake Enon Aquatic Vegetation

			Monitoring Zone	Near-Field							
			Field ID	24-AV-04	24-AV-05	24-AV-06	24-AV-07	24-AV-08	24-AV-09	24-AV-10	24-AV-11	24-AV-12
			Sample Material	Aquatic Vegetation	Aquatic Vegetation	Aquatic Vegetation	Aquatic Vegetation	Aquatic Vegetation	Aquatic Vegetation	Aquatic Vegetation	Aquatic Vegetation	Aquatic Vegetation
			Date	30 May 2024	30 May 2024	30 May 2024	30 May 2024	30 May 2024	30 May 2024	30 May 2024	30 May 2024	30 May 2024
Parameter		Unit	RDL									
Metals												
	Aluminium	mg/kg	10.00	2,700	7,500	1,400	320	1,000	1,000	270	760	77
	Antimony	mg/kg	2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
	Arsenic	mg/kg	2.0	2.2	4.9	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
	Barium	mg/kg	5.00	620	1,000	310	91	180	140	140	270	40
	Beryllium	mg/kg	2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
	Boron	mg/kg	5.00	21	14	26	7.9	9.3	9.4	29	12	6.3
	Cadmium	mg/kg	0.3	2.3	5.5	2.7	1.2	2.1	1.9	1.8	1.7	1.9
	Chromium (Total, III+VI)	mg/kg	2.000	3.8	7.6	2.4	<2.0	<2.0	<2.0	<2.0	2	<2.0
	Cobalt	mg/kg	1.0	2.2	4.5	1	<1.0	1	1.4	<1.0	<1.0	<1.0
	Copper	mg/kg	2.00	14	16	7.1	7.7	5.6	5.4	6.3	6.7	16
	Iron	mg/kg	50.00	4,700	10,000	2,200	750	1,600	1,200	440	1,400	120
	Lead	mg/kg	0.50	48	150	42	10	19	19	7.3	21	3.1
	Manganese	mg/kg	2.00	5,200	13,000	1,600	1,100	2,300	2,500	710	1,500	460
	Mercury	mg/kg	0.01	0.019	0.057	<0.010	0.013	0.033	0.038	<0.010	<0.010	<0.010
	Molybdenum	mg/kg	2.000	<2.0	2.7	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
	Nickel	mg/kg	2.0	4.2	8.8	2.5	<2.0	<2.0	2	<2.0	<2.0	<2.0
	Selenium	mg/kg	2.000	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
	Lithium	mg/kg	2.00	3.2	9.9	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
	Silver	mg/kg	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	Strontium	mg/kg	5.00	940	1,500	1,500	520	680	870	1,300	480	310
	Thallium	mg/kg	0.10	0.11	0.17	0.13	<0.10	<0.10	<0.10	0.14	<0.10	<0.10
	Uranium	mg/kg	0.10	0.79	2.7	0.59	0.17	0.42	0.66	0.39	0.23	<0.10
	Vanadium	mg/kg	2	6.5	15	3.1	<2.0	2.2	<2.0	<2.0	<2.0	<2.0
	Zinc	mg/kg	5	220	390	290	110	140	150	180	130	46

Notes

RDL = Reportable Detection Limit

Table L3: Metals Concentrations in Lake Enon Aquatic Vegetation

			Summary - Near-Field Statistics						
			Number of Samples	Number of Non-Detects	Number of Detects	Minimum Concentration (µg/g)	Minimum Detect	Maximum Concentration (µg/g)	Maximum Detect
Parameter	Unit	RDL							
Metals									
Aluminium	mg/kg	10.00	9	0	9	77	77	7500	7500
Antimony	mg/kg	2.0	9	9	0	<2.0	-	<2.0	-
Arsenic	mg/kg	2.0	9	7	2	<2.0	2.2	4.9	4.9
Barium	mg/kg	5.00	9	0	9	40	40	1000	1000
Beryllium	mg/kg	2.0	9	9	0	<2.0	-	<2.0	-
Boron	mg/kg	5.00	9	0	9	6.3	6.3	29	29
Cadmium	mg/kg	0.3	9	0	9	1.2	1.2	5.5	5.5
Chromium (Total, III+VI)	mg/kg	2.000	9	5	4	<2.0	2	7.6	7.6
Cobalt	mg/kg	1.0	9	4	5	<1.0	1	4.5	4.5
Copper	mg/kg	2.00	9	0	9	5.4	5.4	16	16
Iron	mg/kg	50.00	9	0	9	120	120	10000	10000
Lead	mg/kg	0.50	9	0	9	3.1	3.1	150	150
Manganese	mg/kg	2.00	9	0	9	460	460	13000	13000
Mercury	mg/kg	0.01	9	4	5	<0.010	0.013	0.057	0.057
Molybdenum	mg/kg	2.000	9	8	1	<2.0	2.7	2.7	2.7
Nickel	mg/kg	2.0	9	5	4	<2.0	2	8.8	8.8
Selenium	mg/kg	2.000	9	9	0	<2.0	-	<2.0	-
Lithium	mg/kg	2.00	9	7	2	<2.0	3.2	9.9	9.9
Silver	mg/kg	0.50	9	9	0	<0.50	-	<0.50	-
Strontium	mg/kg	5.00	9	0	9	310	310	1500	1500
Thallium	mg/kg	0.10	9	5	4	<0.10	0.11	0.17	0.17
Uranium	mg/kg	0.10	9	1	8	<0.10	0.17	2.7	2.7
Vanadium	mg/kg	2	9	5	4	<2.0	2.2	15	15
Zinc	mg/kg	5	9	0	9	46	46	390	390

Notes

RDL = Reportable Detection Limit

Table L4: Metals Concentrations in Lake Enon Bivalves

			Monitoring Zone	Far-Field			Summary - Far-Field Statistics						
			Field ID	24-BV-01	24-BV-02	24-BV-03	Number of Samples	Number of Non-Detects	Number of Detects	Minimum Concentration (µg/g)	Minimum Detect	Maximum Concentration (µg/g)	Maximum Detect
			Sample Material	Bivalve	Bivalve	Bivalve							
			Date	28 May 2024	30 May 2024	30 May 2024							
Parameter		Unit	RDL										
Metals													
	Aluminium	mg/kg	2.50	58	110	120	3	0	3	58	58	120	120
	Antimony	mg/kg	0.5	<0.50	<0.50	<0.50	3	3	0	<0.50	-	<0.50	-
	Arsenic	mg/kg	0.5	<0.50	<0.50	<0.50	3	3	0	<0.50	-	<0.50	-
	Barium	mg/kg	1.50	110	140	160	3	0	3	110	110	160	160
	Beryllium	mg/kg	0.5	<0.50	<0.50	<0.50	3	3	0	<0.50	-	<0.50	-
	Boron	mg/kg	1.50	<1.5	<1.5	<1.5	3	3	0	<1.5	-	<1.5	-
	Cadmium	mg/kg	0.05	2.4	2.1	2.5	3	0	3	2.1	2.1	2.5	2.5
	Chromium (Total, III+VI)	mg/kg	0.500	<0.50	<0.50	<0.50	3	3	0	<0.50	-	<0.50	-
	Cobalt	mg/kg	0.2	<0.20	<0.20	<0.20	3	3	0	<0.20	-	<0.20	-
	Copper	mg/kg	0.50	1.4	1.3	1.5	3	0	3	1.3	1.3	1.5	1.5
	Iron	mg/kg	15.00	160	220	240	3	0	3	160	160	240	240
	Lead	mg/kg	0.18	1.6	1.8	2.1	3	0	3	1.6	1.6	2.1	2.1
	Manganese	mg/kg	0.50	670	920	840	3	0	3	670	670	920	920
	Mercury	mg/kg	0.01	0.067	0.033	0.051	3	0	3	0.033	0.033	0.067	0.067
	Molybdenum	mg/kg	0.500	<0.50	<0.50	<0.50	3	3	0	<0.50	-	<0.50	-
	Nickel	mg/kg	0.5	<0.50	<0.50	<0.50	3	3	0	<0.50	-	<0.50	-
	Selenium	mg/kg	0.500	0.87	0.8	0.93	3	0	3	0.8	0.8	0.93	0.93
	Lithium	mg/kg	0.500	<0.50	<0.50	<0.50	3	3	0	<0.50	-	<0.50	-
	Silver	mg/kg	0.120	1	0.98	1.2	3	0	3	0.98	0.98	1.2	1.2
	Strontium	mg/kg	1.500	230	280	350	3	0	3	230	230	350	350
	Thallium	mg/kg	0.02	<0.020	<0.020	<0.020	3	3	0	<0.020	-	<0.020	-
	Tin	mg/kg	0.5	<0.50	<0.50	<0.50	3	3	0	<0.50	-	<0.50	-
	Uranium	mg/kg	0.02	0.041	0.049	0.046	3	0	3	0.041	0.041	0.049	0.049
	Vanadium	mg/kg	0.5	<0.50	<0.50	<0.50	3	3	0	<0.50	-	<0.50	-
	Zinc	mg/kg	1.5	17	20	24	3	0	3	17	17	24	24

Notes

RDL = Reportable Detection Limit

Table L4: Metals Concentrations in Lake Enon Bivalves

			Monitoring Zone	Near-Field							
			Field ID	24-BV-04	24-BV-05	24-BV-06	24-BV-07	24-BV-08	24-BV-09	24-BV-10	24-BV-11	24-BV-12
			Sample Material	Bivalve	Bivalve	Bivalve	Bivalve	Bivalve	Bivalve	Bivalve	Bivalve	Bivalve
			Date	30 May 2024	30 May 2024	30 May 2024	30 May 2024	30 May 2024	30 May 2024	30 May 2024	30 May 2024	30 May 2024
Parameter		Unit	RDL									
Metals												
	Aluminium	mg/kg	2.50	84	110	170	83	92	70	120	200	110
	Antimony	mg/kg	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	Arsenic	mg/kg	0.5	<0.50	0.52	<0.50	<0.50	<0.50	<0.50	<0.50	0.54	<0.50
	Barium	mg/kg	1.50	100	130	130	120	98	140	140	140	63
	Beryllium	mg/kg	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	Boron	mg/kg	1.50	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5
	Cadmium	mg/kg	0.05	2.7	3.3	2.5	1.6	2.6	2.7	3.2	4.5	3.9
	Chromium (Total, III+VI)	mg/kg	0.500	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	Cobalt	mg/kg	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.21	<0.20
	Copper	mg/kg	0.50	1.4	1.6	1.8	1.3	1.3	1.4	1.6	1.7	1.3
	Iron	mg/kg	15.00	200	250	300	170	180	200	270	360	200
	Lead	mg/kg	0.18	1.7	2.1	3.8	1.8	1.6	1.5	2.6	4	2.2
	Manganese	mg/kg	0.50	470	560	760	710	500	810	690	770	330
	Mercury	mg/kg	0.01	0.063	0.061	0.04	0.031	0.027	0.049	0.059	0.051	0.048
	Molybdenum	mg/kg	0.500	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	Nickel	mg/kg	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	Selenium	mg/kg	0.500	0.92	1	0.84	0.8	0.85	1.1	1	1.2	0.87
	Lithium	mg/kg	0.500	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	Silver	mg/kg	0.120	1.1	1.3	0.69	0.63	0.73	1	1.4	0.79	1
	Strontium	mg/kg	1.500	210	310	270	290	200	450	310	240	140
	Thallium	mg/kg	0.02	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
	Tin	mg/kg	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	Uranium	mg/kg	0.02	0.043	0.054	0.056	0.043	0.037	0.042	0.056	0.066	0.04
	Vanadium	mg/kg	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	Zinc	mg/kg	1.5	19	22	33	28	21	23	22	23	15

Notes

RDL = Reportable Detection Limit

Table L4: Metals Concentrations in Lake Enon Bivalves

			Summary - Near-Field Statistics						
			Number of Samples	Number of Non-Detects	Number of Detects	Minimum Concentration (µg/g)	Minimum Detect	Maximum Concentration (µg/g)	Maximum Detect
Parameter	Unit	RDL							
Metals									
Aluminium	mg/kg	2.50	9	0	9	70	70	200	200
Antimony	mg/kg	0.5	9	9	0	<0.50	-	<0.50	-
Arsenic	mg/kg	0.5	9	7	2	<0.50	0.52	0.54	0.54
Barium	mg/kg	1.50	9	0	9	63	63	140	140
Beryllium	mg/kg	0.5	9	9	0	<0.50	-	<0.50	-
Boron	mg/kg	1.50	9	9	0	<1.5	-	<1.5	-
Cadmium	mg/kg	0.05	9	0	9	1.6	1.6	4.5	4.5
Chromium (Total, III+VI)	mg/kg	0.500	9	9	0	<0.50	-	<0.50	-
Cobalt	mg/kg	0.2	9	8	1	<0.20	0.21	0.21	0.21
Copper	mg/kg	0.50	9	0	9	1.3	1.3	1.8	1.8
Iron	mg/kg	15.00	9	0	9	170	170	360	360
Lead	mg/kg	0.18	9	0	9	1.5	1.5	4	4
Manganese	mg/kg	0.50	9	0	9	330	330	810	810
Mercury	mg/kg	0.01	9	0	9	0.027	0.027	0.063	0.063
Molybdenum	mg/kg	0.500	9	9	0	<0.50	-	<0.50	-
Nickel	mg/kg	0.5	9	9	0	<0.50	-	<0.50	-
Selenium	mg/kg	0.500	9	0	9	0.8	0.8	1.2	1.2
Lithium	mg/kg	0.500	9	9	0	<0.50	-	<0.50	-
Silver	mg/kg	0.120	9	0	9	0.63	0.63	1.4	1.4
Strontium	mg/kg	1.500	9	0	9	140	140	450	450
Thallium	mg/kg	0.02	9	9	0	<0.020	-	<0.020	-
Tin	mg/kg	0.5	9	9	0	<0.50	-	<0.50	-
Uranium	mg/kg	0.02	9	0	9	0.037	0.037	0.066	0.066
Vanadium	mg/kg	0.5	9	9	0	<0.50	-	<0.50	-
Zinc	mg/kg	1.5	9	0	9	15	15	33	33

Notes

RDL = Reportable Detection Limit

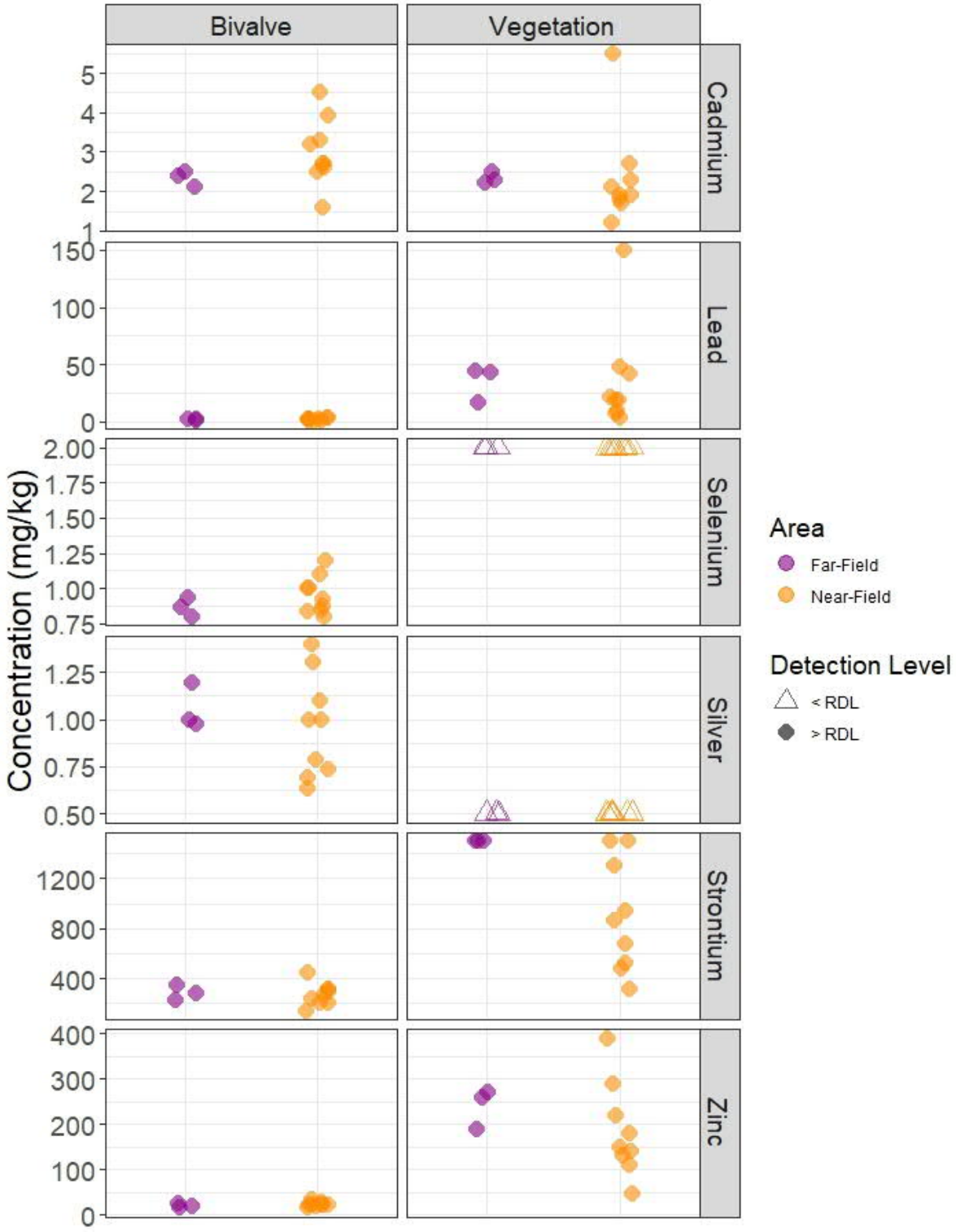

Figure L4: COPC Concentrations in Bivalve Tissue and Aquatic Vegetation from Lake Enon (mg/kg dw).

4.2.2 Uptake From Sediment

Concentrations of COPCs in sediment samples that were co-located with aquatic vegetation and bivalve tissue samples were evaluated to determine whether a linear correlation existed between the two media types, which would suggest that concentrations in tissue samples are associated with sediment contamination (Table L5 and Table L6). Note that the analysis evaluated the potential for a linear relationship between the two media types as the dataset was not large enough for other statistical regression analysis.

					Monitoring Zone	Background					
					Field ID	24-AV-01	SED 27	24-AV-02	SED 28	24-AV-03	SED 29
					Media	Vegetation	Sediment	Vegetation	Sediment	Vegetation	Sediment
					Date	28 May 2024	28 May 2024	30 May 2024	28 May 2024	30 May 2024	28 May 2024
Parameter		Unit	RDL (Vegetation)	RDL (Sediment)	$SedQG_E$						
Metals											
	Aluminium	mg/kg	10	10	NGA	980	22,000	2500	25,000	2500	30,000
	Antimony	mg/kg	2	2	25.0 [d]	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
	Arsenic	mg/kg	2	2	17.0 [a]	Table L5	8.7	<2.0	8.7	<2.0	8.5
	Barium	mg/kg	5	5	NGA	200	700	350	950	470	540
	Beryllium	mg/kg	2	1	NGA	<2.0	1.1	<2.0	1.2	<2.0	1.5
	Bismuth	mg/kg	-	2	NGA	-	<2.0	-	<2.0	-	<2.0
	Boron	mg/kg	5	50	NGA	30	<50	27	<50	28	<50
	Cadmium	mg/kg	0.3	0.3	3.5 [a]	2.2	5.7	2.3	8.4	2.5	5.2
	Chromium (Total, III+VI)	mg/kg	2	2	90 [a]	<2.0	20	3	21	2.9	25
	Cobalt	mg/kg	1	1	NGA	<1.0	12	1.5	12	1.5	12
	Copper	mg/kg	2	2	197 [a]	5.6	20	6.8	24	7.8	28
	Iron	mg/kg	50	50	43,766 [b]	1400	29,000	3500	30,000	3700	29,000
	Lead	mg/kg	0.5	0.5	91.3 [a]	17	220	43	210	44	220
	Manganese	mg/kg	2	2	1100 [b]	1500	6,900	3200	23,000	3900	1,500
	Mercury	mg/kg	0.01	0.1	0.486 [a]	0.013	0.15	0.021	0.17	0.018	0.17
	Molybdenum	mg/kg	2	2	NGA	<2.0	3.1	<2.0	9.5	<2.0	4.4
	Nickel	mg/kg	2	2	75 [b]	<2.0	21	5	24	3.1	25
	Rubidium	mg/kg	-	2	NGA	-	17	-	18	-	21
	Selenium	mg/kg	2	0.5	2.0 [c]	<2.0	1.4	<2.0	1.6	<2.0	2.2
	Lithium	mg/kg	2	2	NGA	<2.0	29	2.9	29	2.2	40
	Silver	mg/kg	0.5	0.5	0.5 [b]	<0.50	0.85	<0.50	0.97	<0.50	1.3
	Strontium	mg/kg	5	5	NGA	1500	400	1500	720	1500	600
	Thallium	mg/kg	0.1	0.1	NGA	<0.10	0.38	<0.10	0.42	0.12	0.4
	Tin	mg/kg	-	1	NGA	-	1.5	-	1.6	-	1.9
	Uranium	mg/kg	0.1	0.1	NGA	0.39	4	0.63	4.9	0.78	5
	Vanadium	mg/kg	2	2	NGA	2.6	38	5.1	42	4.9	43
	Zinc	mg/kg	5	5	315 [a]	190	580	260	640	270	660

Notes

RDL = Reportable Detection Limit

$SedQG_E$ = Ecological Health-Based Sediment Quality Guideline

Where applicable, guidelines taken from Nova Scotia Tier II Pathway-Specific Standards for Sediment - Freshwater, Table 4. The original source is indicated below.

[a] CCME Canadian Sediment Quality Guidelines for the protection of freshwater aquatic life; Probable Effect Levels (PEL).

[b] BC MECCS (2021) British Columbia Working Sediment Quality Guidelines. Upper SWQG for freshwater aquatic life - Table 2.

[c] BC MECCS (2023) British Columbia Approved Water Quality Guidelines for Aquatic Life (selenium, Table 36).

[d] Simpson et al. 2013. Revision of the ANZECC/ARMCANZ Sediment Quality Guidelines. https://doi.org/10.4225/08/5894c6184320c

[e] Atlantic RBCA, 2021

				Monitoring Zone	Site								
				Field ID	24-AV-04	SED30	24-AV-05	SED31	24-AV-06	SED32	24-AV-07	SED11
				Media	Vegetation	Sediment	Vegetation	Sediment	Vegetation	Sediment	Vegetation	Sediment
				Date	30 May 2024	30 May 2024	30 May 2024	30 May 2024	30 May 2024	30 May 2024	30 May 2024	04 Jul 2023
Parameter	Unit	RDL (Vegetation)	RDL (Sediment)	$SedQG_E$								
Metals												
Aluminium	mg/kg	10	10	NGA	2700	10,000	7500	28,000	1400	18,000	320	14,000
Antimony	mg/kg	2	2	25.0 [d]	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Arsenic	mg/kg	2	2	17.0 [a]	2.2	3.5	4.9	8	<2.0	7.4	<2.0	5
Barium	mg/kg	5	5	NGA	620	250	1000	400	310	720	91	1,600
Beryllium	mg/kg	2	1	NGA	<2.0	<1.0	<2.0	1.4	<2.0	<1.0	<2.0	<1.0
Bismuth	mg/kg	-	2	NGA	-	<2.0	-	<2.0	-	<2.0	-	<2.0
Boron	mg/kg	5	50	NGA	21	<50	14	<50	26	<50	7.9	<50
Cadmium	mg/kg	0.3	0.3	3.5 [a]	2.3	1.8	5.5	7.9	2.7	6.3	1.2	5.6
Chromium (Total, III+VI)	mg/kg	2	2	90 [a]	3.8	11	7.6	21	2.4	20	<2.0	17
Cobalt	mg/kg	1	1	NGA	2.2	6.6	4.5	9.6	1	11	<1.0	9.5
Copper	mg/kg	2	2	197 [a]	14	6.5	16	26	7.1	30	7.7	28
Iron	mg/kg	50	50	43,766 [b]	4700	15,000	10000	20,000	2200	26,000	750	22,000
Lead	mg/kg	0.5	0.5	91.3 [a]	48	71	150	110	42	450	10	430
Manganese	mg/kg	2	2	1100 [b]	5200	2,200	13000	1,200	1600	2,200	1100	4,300
Mercury	mg/kg	0.01	0.1	0.486 [a]	0.019	<0.10	0.057	0.19	<0.010	0.12	0.013	0.11
Molybdenum	mg/kg	2	2	NGA	<2.0	<2.0	2.7	2.9	<2.0	2.5	<2.0	2.1
Nickel	mg/kg	2	2	75 [b]	4.2	9.8	8.8	21	2.5	24	<2.0	19
Rubidium	mg/kg	-	2	NGA	-	7.2	-	16	-	15	-	12
Selenium	mg/kg	2	0.5	2.0 [c]	<2.0	<0.50	<2.0	2.9	<2.0	1.2	<2.0	1.6
Lithium	mg/kg	2	2	NGA	3.2	13	9.9	31	<2.0	30	<2.0	23
Silver	mg/kg	0.5	0.5	0.5 [b]	<0.50	0.71	<0.50	1.4	<0.50	1.2	<0.50	1
Strontium	mg/kg	5	5	NGA	940	150	1500	640	1500	7,200	520	390
Thallium	mg/kg	0.1	0.1	NGA	0.11	0.14	0.17	0.36	0.13	0.35	<0.10	0.25
Tin	mg/kg	-	1	NGA	-	<1.0	-	<1.0	-	<1.0	-	<1.0
Uranium	mg/kg	0.1	0.1	NGA	0.79	1.5	2.7	4.9	0.59	2.8	0.17	3.8
Vanadium	mg/kg	2	2	NGA	6.5	18	15	34	3.1	34	<2.0	28
Zinc	mg/kg	5	5	315 [a]	220	240	390	520	290	870	110	970

Notes

RDL = Reportable Detection Limit

$SedQG_E$ = Ecological Health-Based Sediment Quality Guideline

Where applicable, guidelines taken from Nova Scotia Tier II Pathway-Specific Standards for Sediment - Freshwater, Table 4. The original source is indicated below.

[a] CCME Canadian Sediment Quality Guidelines for the protection of freshwater aquatic life; Probable Effect Levels (PEL).

[b] BC MECCS (2021) British Columbia Working Sediment Quality Guidelines. Upper SWQG for freshwater aquatic life - Table 2.

[c] BC MECCS (2023) British Columbia Approved Water Quality Guidelines for Aquatic Life (selenium, Table 36).

[d] Simpson et al. 2013. Revision of the ANZECC/ARMCANZ Sediment Quality Guidelines. https://doi.org/10.4225/08/5894c6184320c

[e] Atlantic RBCA, 2021

Parameter	Unit	RDL (Vegetation)	RDL (Sediment)	$SedQG_E$	Monitoring Zone	Site									
					Field ID	24-AV-08	SED 14	24-AV-09	SED35	24-AV-10	SED12	24-AV-11	SED46	24-AV-12	SED23
					Media	Vegetation	Sediment	Vegetation	Sediment	Vegetation	Sediment	Vegetation	Sediment	Vegetation	Sediment
					Date	30 May 2024	04 Jul 2023	30 May 2024	30 May 2024	30 May 2024	04 Jul 2023	30 May 2024	30 May 2024	30 May 2024	30 May 2024
Metals															
Aluminium	mg/kg	10	10	NGA		1000	9,500	1000	8,200	270	2,400	760	16,000	77	10,000
Antimony	mg/kg	2	2	25.0 [d]		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Arsenic	mg/kg	2	2	17.0 [a]		<2.0	4.3	<2.0	2.7	<2.0	<2.0	<2.0	7.2	<2.0	3.1
Barium	mg/kg	5	5	NGA		180	600	140	250	140	70	270	1,300	40	440
Beryllium	mg/kg	2	1	NGA		<2.0	<1.0	<2.0	<1.0	<2.0	<1.0	<2.0	<1.0	<2.0	<1.0
Bismuth	mg/kg	-	2	NGA		-	<2.0	-	<2.0	-	<2.0	-	<2.0	-	<2.0
Boron	mg/kg	5	50	NGA		9.3	<50	9.4	<50	29	<50	12	<50	6.3	<50
Cadmium	mg/kg	0.3	0.3	3.5 [a]		2.1	2.2	1.9	1.3	1.8	<0.30	1.7	6.7	1.9	2.4
Chromium (Total, III+VI)	mg/kg	2	2	90 [a]		<2.0	14	<2.0	9.7	<2.0	3.1	2	18	<2.0	11
Cobalt	mg/kg	1	1	NGA		1	8.4	1.4	5.3	<1.0	2	<1.0	11	<1.0	6.1
Copper	mg/kg	2	2	197 [a]		5.6	6.8	5.4	5.9	6.3	<2.0	6.7	25	16	8.9
Iron	mg/kg	50	50	43,766 [b]		1600	21,000	1200	13,000	440	3,500	1400	28,000	120	17,000
Lead	mg/kg	0.5	0.5	91.3 [a]		19	73	19	69	7.3	18	21	370	3.1	120
Manganese	mg/kg	2	2	1100 [b]		2300	7,000	2500	1,800	710	410	1500	4,200	460	3,500
Mercury	mg/kg	0.01	0.1	0.486 [a]		0.033	<0.10	0.038	<0.10	<0.010	<0.10	<0.010	<0.10	<0.010	<0.10
Molybdenum	mg/kg	2	2	NGA		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.6	<2.0	<2.0
Nickel	mg/kg	2	2	75 [b]		<2.0	11	2	9.4	<2.0	3.1	<2.0	22	<2.0	9.5
Rubidium	mg/kg	-	2	NGA		-	5	-	6.2	-	<2.0	-	14	-	7.5
Selenium	mg/kg	2	0.5	2.0 [c]		<2.0	<0.50	<2.0	<0.50	<2.0	<0.50	<2.0	0.84	<2.0	0.56
Lithium	mg/kg	2	2	NGA		<2.0	16	<2.0	12	<2.0	4.3	<2.0	26	<2.0	15
Silver	mg/kg	0.5	0.5	0.5 [b]		<0.50	<0.50	<0.50	0.51	<0.50	<0.50	<0.50	1	<0.50	<0.50
Strontium	mg/kg	5	5	NGA		680	160	870	110	1300	32	480	290	310	150
Thallium	mg/kg	0.1	0.1	NGA		<0.10	0.13	<0.10	0.12	0.14	<0.10	<0.10	0.33	<0.10	0.16
Tin	mg/kg	-	1	NGA		-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0
Uranium	mg/kg	0.1	0.1	NGA		0.42	0.97	0.66	1	0.39	0.27	0.23	2.5	<0.10	1.6
Vanadium	mg/kg	2	2	NGA		2.2	28	<2.0	16	<2.0	5.1	<2.0	34	<2.0	21
Zinc	mg/kg	5	5	315 [a]		140	330	150	240	180	49	130	780	46	310

Notes

RDL = Reportable Detection Limit

$SedQG_E$ = Ecological Health-Based Sediment Quality Guideline

Where applicable, guidelines taken from Nova Scotia Tier II Pathway-Specific Standards for Sediment - Freshwater, Table 4. The original source is indicated below.

[a] CCME Canadian Sediment Quality Guidelines for the protection of freshwater aquatic life; Probable Effect Levels (PEL).

[b] BC MECCS (2021) British Columbia Working Sediment Quality Guidelines. Upper SWQG for freshwater aquatic life - Table 2.

[c] BC MECCS (2023) British Columbia Approved Water Quality Guidelines for Aquatic Life (selenium, Table 36).

[d] Simpson et al. 2013. Revision of the ANZECC/ARMCANZ Sediment Quality Guidelines. https://doi.org/10.4225/08/5894c6184320c

[e] Atlantic RBCA, 2021

				Monitoring Zone	Background						
				Field ID	24-BV-01	SED27	24-BV-02	SED28	24-BV-03	SED29
				Media	Bivalve	Sediment	Bivalve	Sediment	Bivalve	Sediment
				Date	28 May 2024	28 May 2024	30 May 2024	28 May 2024	30 May 2024	28 May 2024
Parameter	Unit	RDL (Bivalve)	RDL (Sediment)	$SedQG_E$						
Metals										
Aluminium	mg/kg	2.5	10	NGA	58	22,000	110	25,000	120	30,000
Antimony	mg/kg	0.5	2	25.0 [d]	<0.50	<2.0	<0.50	<2.0	<0.50	<2.0
Arsenic	mg/kg	0.5	2	17.0 [a]	<0.50	8.7	<0.50	8.7	<0.50	8.5
Barium	mg/kg	1.5	5	NGA	110	700	140	950	160	540
Beryllium	mg/kg	0.5	1	NGA	<0.50	1.1	<0.50	1.2	<0.50	1.5
Bismuth	mg/kg	-	2	NGA	-	<2.0	-	<2.0	-	<2.0
Boron	mg/kg	1.5	50	NGA	<1.5	<50	<1.5	<50	<1.5	<50
Cadmium	mg/kg	0.05	0.3	3.5 [a]	2.4	5.7	2.1	8.4	2.5	5.2
Chromium (Total, III+VI)	mg/kg	0.5	2	90 [a]	<0.50	20	<0.50	21	<0.50	25
Cobalt	mg/kg	0.2	1	NGA	<0.20	12	<0.20	12	<0.20	12
Copper	mg/kg	0.5	2	197 [a]	1.4	20	1.3	24	1.5	28
Iron	mg/kg	15	50	43,766 [b]	160	29,000	220	30,000	240	29,000
Lead	mg/kg	0.18	0.5	91.3 [a]	1.6	220	1.8	210	2.1	220
Manganese	mg/kg	0.5	2	1100 [b]	670	6,900	920	23,000	840	1,500
Mercury	mg/kg	0.01	0.1	0.486 [a]	0.067	0.15	0.033	0.17	0.051	0.17
Molybdenum	mg/kg	0.5	2	NGA	<0.50	3.1	<0.50	9.5	<0.50	4.4
Nickel	mg/kg	0.5	2	75 [b]	<0.50	21	<0.50	24	<0.50	25
Rubidium	mg/kg	-	2	NGA	-	17	-	18	-	21
Selenium	mg/kg	0.5	0.50	2.0 [c]	0.87	1.4	0.8	1.6	0.93	2.2
Lithium	mg/kg	0.5	2.00	NGA	<0.50	29	<0.50	29	<0.50	40
Silver	mg/kg	0.12	0.5	0.5 [b]	1	0.85	0.98	0.97	1.2	1.3
Strontium	mg/kg	1.5	5	NGA	230	400	280	720	350	600
Thallium	mg/kg	0.02	0.1	NGA	<0.020	0.38	<0.020	0.42	<0.020	0.4
Tin	mg/kg	0.5	1	NGA	<0.50	1.5	<0.50	1.6	<0.50	1.9
Uranium	mg/kg	0.02	0.1	NGA	0.041	4	0.049	4.9	0.046	5
Vanadium	mg/kg	0.5	2	NGA	<0.50	38	<0.50	42	<0.50	43
Zinc	mg/kg	1.5	5	315 [a]	17	580	20	640	24	660

Notes

RDL = Reportable Detection Limit

$SedQG_E$ = Ecological Health-Based Sediment Quality Guideline

Where applicable, guidelines taken from Nova Scotia Tier II Pathway-Specific Standards for Sediment - Freshwater, Table 4. The original source is indicated below.

[a] CCME Canadian Sediment Quality Guidelines for the protection of freshwater aquatic life; Probable Effect Levels (PEL).

[b] BC MECCS (2021) British Columbia Working Sediment Quality Guidelines. Upper SWQG for freshwater aquatic life - Table 2.

[c] BC MECCS (2023) British Columbia Approved Water Quality Guidelines for Aquatic Life (selenium, Table 36).

[d] Simpson et al. 2013. Revision of the ANZECC/ARMCANZ Sediment Quality Guidelines. https://doi.org/10.4225/08/5894c6184320c

[e] Atlantic RBCA, 2021

					Monitoring Zone	Site							
					Field ID	24-BV-04	SED30	24-BV-05	SED31	24-BV-06	SED32	24-BV-07	SED11
					Media	Bivalve	Sediment	Bivalve	Sediment	Bivalve	Sediment	Bivalve	Sediment
					Date	30 May 2024	30 May 2024	30 May 2024	30 May 2024	30 May 2024	30 May 2024	30 May 2024	04 Jul 2023
Parameter	Unit	RDL (Bivalve)	RDL (Sediment)	$SedQG_E$									
Metals													
Aluminium	mg/kg	2.5	10	NGA		84	10,000	110	28,000	170	18,000	83	14,000
Antimony	mg/kg	0.5	2	25.0 [d]		<0.50	<2.0	<0.50	<2.0	<0.50	<2.0	<0.50	<2.0
Arsenic	mg/kg	0.5	2	17.0 [a]		<0.50	3.5	0.52	8	<0.50	7.4	<0.50	5
Barium	mg/kg	1.5	5	NGA		100	250	130	400	130	720	120	1,600
Beryllium	mg/kg	0.5	1	NGA		<0.50	<1.0	<0.50	1.4	<0.50	<1.0	<0.50	<1.0
Bismuth	mg/kg	-	2	NGA		-	<2.0	-	<2.0	-	<2.0	-	<2.0
Boron	mg/kg	1.5	50	NGA		<1.5	<50	<1.5	<50	<1.5	<50	<1.5	<50
Cadmium	mg/kg	0.05	0.3	3.5 [a]		2.7	1.8	3.3	7.9	2.5	6.3	1.6	5.6
Chromium (Total, III+VI)	mg/kg	0.5	2	90 [a]		<0.50	11	<0.50	21	<0.50	20	<0.50	17
Cobalt	mg/kg	0.2	1	NGA		<0.20	6.6	<0.20	9.6	<0.20	11	<0.20	9.5
Copper	mg/kg	0.5	2	197 [a]		1.4	6.5	1.6	26	1.8	30	1.3	28
Iron	mg/kg	15	50	43,766 [b]		200	15,000	250	20,000	300	26,000	170	22,000
Lead	mg/kg	0.18	0.5	91.3 [a]		1.7	71	2.1	110	3.8	450	1.8	430
Manganese	mg/kg	0.5	2	1100 [b]		470	2,200	560	1,200	760	2,200	710	4,300
Mercury	mg/kg	0.01	0.1	0.486 [a]		0.063	<0.10	0.061	0.19	0.04	0.12	0.031	0.11
Molybdenum	mg/kg	0.5	2	NGA		<0.50	<2.0	<0.50	2.9	<0.50	2.5	<0.50	2.1
Nickel	mg/kg	0.5	2	75 [b]		<0.50	9.8	<0.50	21	<0.50	24	<0.50	19
Rubidium	mg/kg	-	2	NGA		-	7.2	-	16	-	<1.0	-	<1.0
Selenium	mg/kg	0.5	0.50	2.0 [c]		0.92	<0.50	1	2.9	0.84	1.2	0.8	1.6
Lithium	mg/kg	0.5	2.00	NGA		<0.50	13	<0.50	31	<0.50	30	<0.50	23
Silver	mg/kg	0.12	0.5	0.5 [b]		1.1	0.71	1.3	1.4	0.69	1.2	0.63	T
Strontium	mg/kg	1.5	5	NGA		210	150	310	640	270	7,200	290	390
Thallium	mg/kg	0.02	0.1	NGA		<0.020	0.14	<0.020	0.36	<0.020	0.35	<0.020	0.25
Tin	mg/kg	0.5	1	NGA		<0.50	<1.0	<0.50	<1.0	<0.50	2.8	<0.50	3.8
Uranium	mg/kg	0.02	0.1	NGA		0.043	1.5	0.054	4.9	0.056	34	0.043	28
Vanadium	mg/kg	0.5	2	NGA		<0.50	18	<0.50	34	<0.50	870	<0.50	970
Zinc	mg/kg	1.5	5	315 [a]		19	240	22	520	33	15	28	12

Notes

RDL = Reportable Detection Limit

$SedQG_E$ = Ecological Health-Based Sediment Quality Guideline

Where applicable, guidelines taken from Nova Scotia Tier II Pathway-Specific Standards for Sediment - Freshwater, Table 4. The original source is indicated below.

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[e] Atlantic RBCA, 2021

					Monitoring Zone	Site									
					Field ID	24-BV-08	SED 14	24-BV-09	SED35	24-BV-10	SED18	24-BV-11	SED19	24-BV-12	SED22
					Media	Bivalve	Sediment	Bivalve	Sediment	Bivalve	Sediment	Bivalve	Sediment	Bivalve	Sediment
					Date	30 May 2024	04 Jul 2023	30 May 2024	30 May 2024	30 May 2024	04 Jul 2023	30 May 2024	04 Jul 2023	30 May 2024	04 Jul 2023
Parameter		Unit	RDL (Bivalve)	RDL (Sediment)	$SedQG_E$										
Metals															
	Aluminium	mg/kg	2.5	10	NGA	92	9,500	70	8,200	120	23,000	200	23,000	110	23,000
	Antimony	mg/kg	0.5	2	25.0 [d]	<0.50	<2.0	<0.50	<2.0	<0.50	<2.0	<0.50	<2.0	<0.50	<2.0
	Arsenic	mg/kg	0.5	2	17.0 [a]	<0.50	4.3	<0.50	2.7	<0.50	7.5	0.54	6.4	<0.50	7.2
	Barium	mg/kg	1.5	5	NGA	98	600	140	250	140	630	140	720	63	450
	Beryllium	mg/kg	0.5	1	NGA	<0.50	<1.0	<0.50	<1.0	<0.50	1.3	<0.50	1.3	<0.50	1.3
	Bismuth	mg/kg	-	2	NGA	-	<2.0	-	<2.0	-	<2.0	-	<2.0	-	<2.0
	Boron	mg/kg	1.5	50	NGA	<1.5	<50	<1.5	<50	<1.5	<50	<1.5	<50	<1.5	<50
	Cadmium	mg/kg	0.05	0.3	3.5 [a]	2.6	2.2	2.7	1.3	3.2	4.3	4.5	5.5	3.9	5.3
	Chromium (Total, III+VI)	mg/kg	0.5	2	90 [a]	<0.50	14	<0.50	9.7	<0.50	24	<0.50	22	<0.50	25
	Cobalt	mg/kg	0.2	1	NGA	<0.20	8.4	<0.20	5.3	<0.20	12	0.21	10	<0.20	11
	Copper	mg/kg	0.5	2	197 [a]	1.3	6.8	1.4	5.9	1.6	27	1.7	25	1.3	25
	Iron	mg/kg	15	50	43,766 [b]	180	21,000	200	13,000	270	27,000	360	27,000	200	26,000
	Lead	mg/kg	0.18	0.5	91.3 [a]	1.6	73	1.5	69	2.6	320	4	410	2.2	290
	Manganese	mg/kg	0.5	2	1100 [b]	500	7,000	810	1,800	690	1,100	770	2,100	330	1,400
	Mercury	mg/kg	0.01	0.1	0.486 [a]	0.027	<0.10	0.049	<0.10	0.059	0.14	0.051	0.14	0.048	0.19
	Molybdenum	mg/kg	0.5	2	NGA	<0.50	<2.0	<0.50	<2.0	<0.50	2.2	<0.50	<2.0	<0.50	2.4
	Nickel	mg/kg	0.5	2	75 [b]	<0.50	11	<0.50	9.4	<0.50	26	<0.50	21	<0.50	24
	Rubidium	mg/kg	-	2	NGA	-	<1.0	-	<1.0	-	1.7	-	1.2	-	1.6
	Selenium	mg/kg	0.5	0.50	2.0 [c]	0.85	<0.50	1.1	<0.50	1	1.7	1.2	1.5	0.87	1.6
	Lithium	mg/kg	0.5	2.00	NGA	<0.50	16	<0.50	12	<0.50	36	<0.50	35	<0.50	37
	Silver	mg/kg	0.12	0.5	0.5 [b]	0.73	<0.50	1	0.51	1.4	0.99	0.79	0.96	1	1
	Strontium	mg/kg	1.5	5	NGA	200	160	450	110	310	450	240	670	140	520
	Thallium	mg/kg	0.02	0.1	NGA	<0.020	0.13	<0.020	0.12	<0.020	0.43	<0.020	0.36	<0.020	0.38
	Tin	mg/kg	0.5	1	NGA	<0.50	0.97	<0.50	1	<0.50	4.3	<0.50	4.6	<0.50	3.9
	Uranium	mg/kg	0.02	0.1	NGA	0.037	28	0.042	16	0.056	41	0.066	41	0.04	40
	Vanadium	mg/kg	0.5	2	NGA	<0.50	330	<0.50	240	<0.50	770	<0.50	730	<0.50	690
	Zinc	mg/kg	1.5	5	315 [a]	21	5	23	6.2	22	17	23	14	15	17

Notes

RDL = Reportable Detection Limit

$SedQG_E$ = Ecological Health-Based Sediment Quality Guideline

Where applicable, guidelines taken from Nova Scotia Tier II Pathway-Specific Standards for Sediment - Freshwater, Table 4. The original source is indicated below.

[a] CCME Canadian Sediment Quality Guidelines for the protection of freshwater aquatic life; Probable Effect Levels (PEL).

[b] BC MECCS (2021) British Columbia Working Sediment Quality Guidelines. Upper SWQG for freshwater aquatic life - Table 2.

[c] BC MECCS (2023) British Columbia Approved Water Quality Guidelines for Aquatic Life (selenium, Table 36).

[d] Simpson et al. 2013. Revision of the ANZECC/ARMCANZ Sediment Quality Guidelines. https://doi.org/10.4225/08/5894c6184320c

[e] Atlantic RBCA, 2021

An analysis was conducted to evaluate the relationship between sediment concentrations and tissue concentrations, from which the Pearson correlation coefficient (i.e., R-squared or r^2 value) was determined (Figure L5 through Figure L10). The R-squared value is a statistical measure indicating the proportion of variance for a dependent variable that is explained by an independent variable, under the assumption of a linear relationship between the two variables. R-squared values range between -1 to 0 and +1, with values closer to +1 signifying a strong positive correlation. As shown in Figure L5 through Figure L10, the R-squared values for each COPC in this analysis are generally very low (i.e., less than 0.1) and indicate low or poor correlation between sediment and tissue COPC concentrations. Grey shading in Figures L5 through L10 represent the 95% confidence interval. The poor correlation between sediment concentrations and tissue concentrations suggests that COPC uptake from sediments into vegetation and bivalve tissues is limited and may reflect a low bioavailability of the COPCs in Lake Enon sediments.

Note that relationships between paired sediment and aquatic vegetation are not shown for selenium and silver as neither of these parameters were detected in these tissue types.

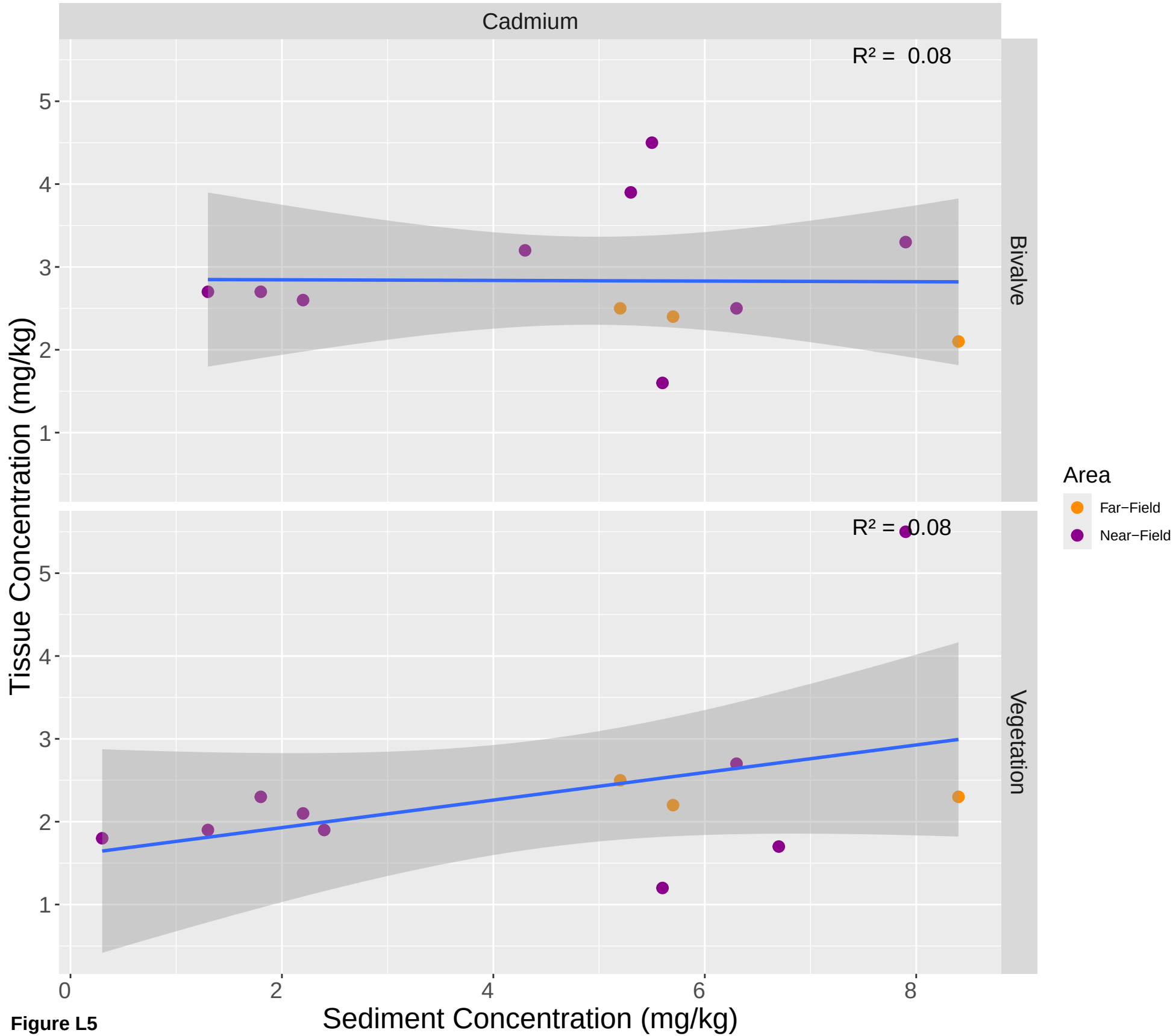
Cadmium
R² = 0.08
R² = 0.08
Bivalve
Vegetation
Tissue Concentration (mg/kg)
Sediment Concentration (mg/kg)
0
2
4
6
8
1
2
3
4
5
Area
Far−Field
Near−Field

Figure L5

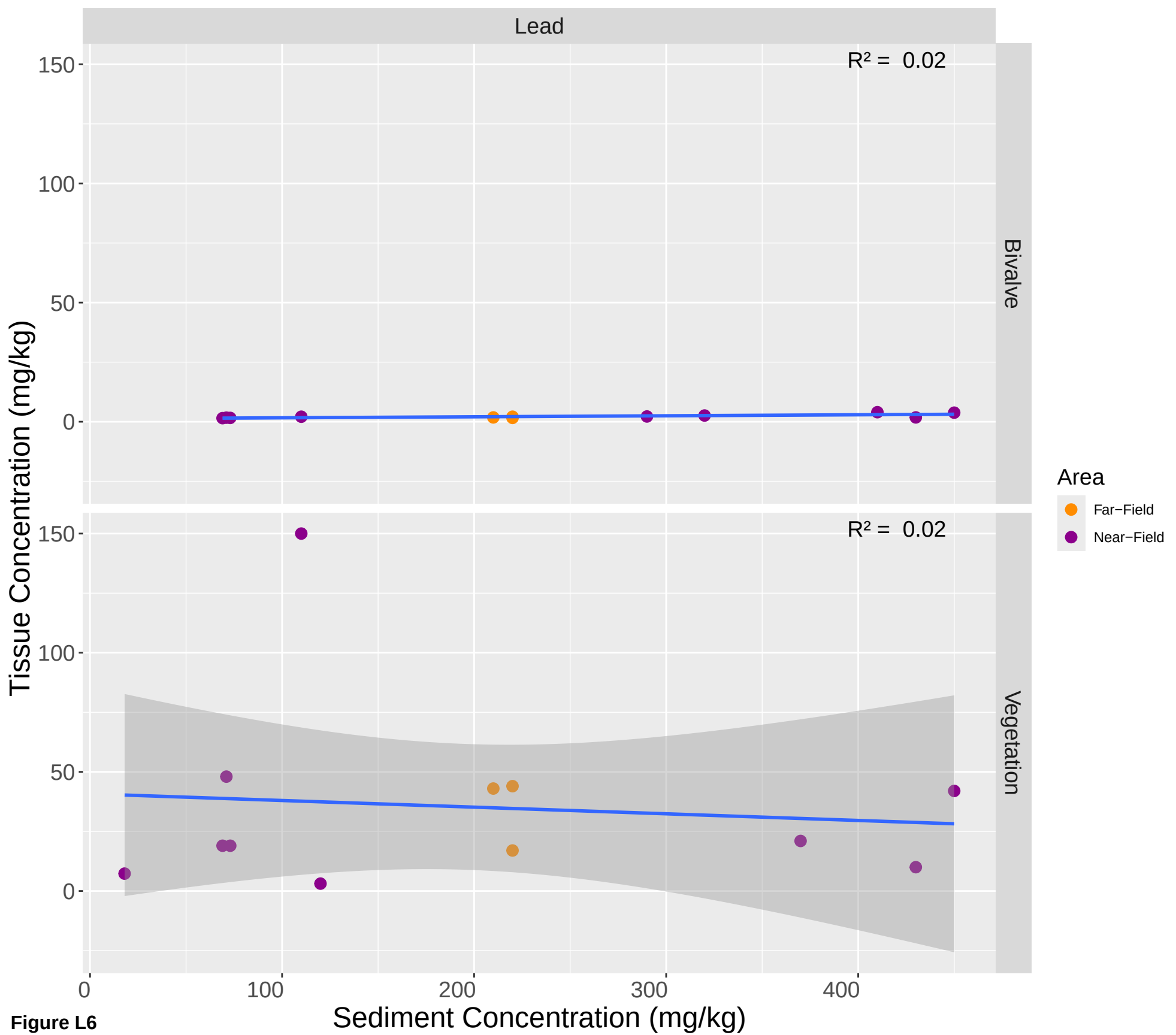
Lead
R² = 0.02
Bivalve
R² = 0.02
Vegetation
Tissue Concentration (mg/kg)
Sediment Concentration (mg/kg)
0
50
100
150
0
100
200
300
400
Area
Far−Field
Near−Field

Figure L6

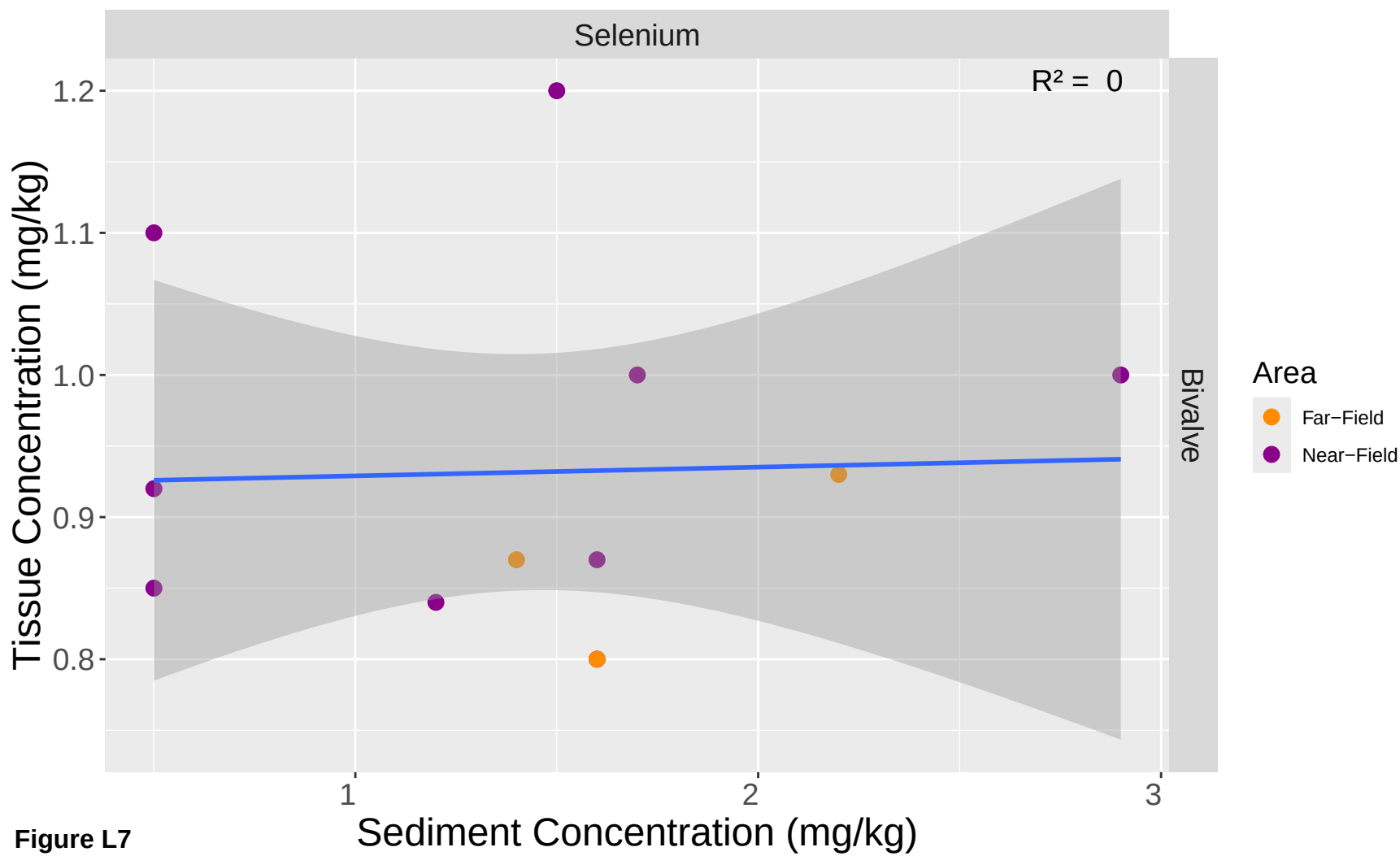
Selenium
R² = 0
Tissue Concentration (mg/kg)
1.2
1.1
1.0
0.9
0.8
1
2
3
Sediment Concentration (mg/kg)
Bivalve
Area
Far−Field
Near−Field

Figure L7

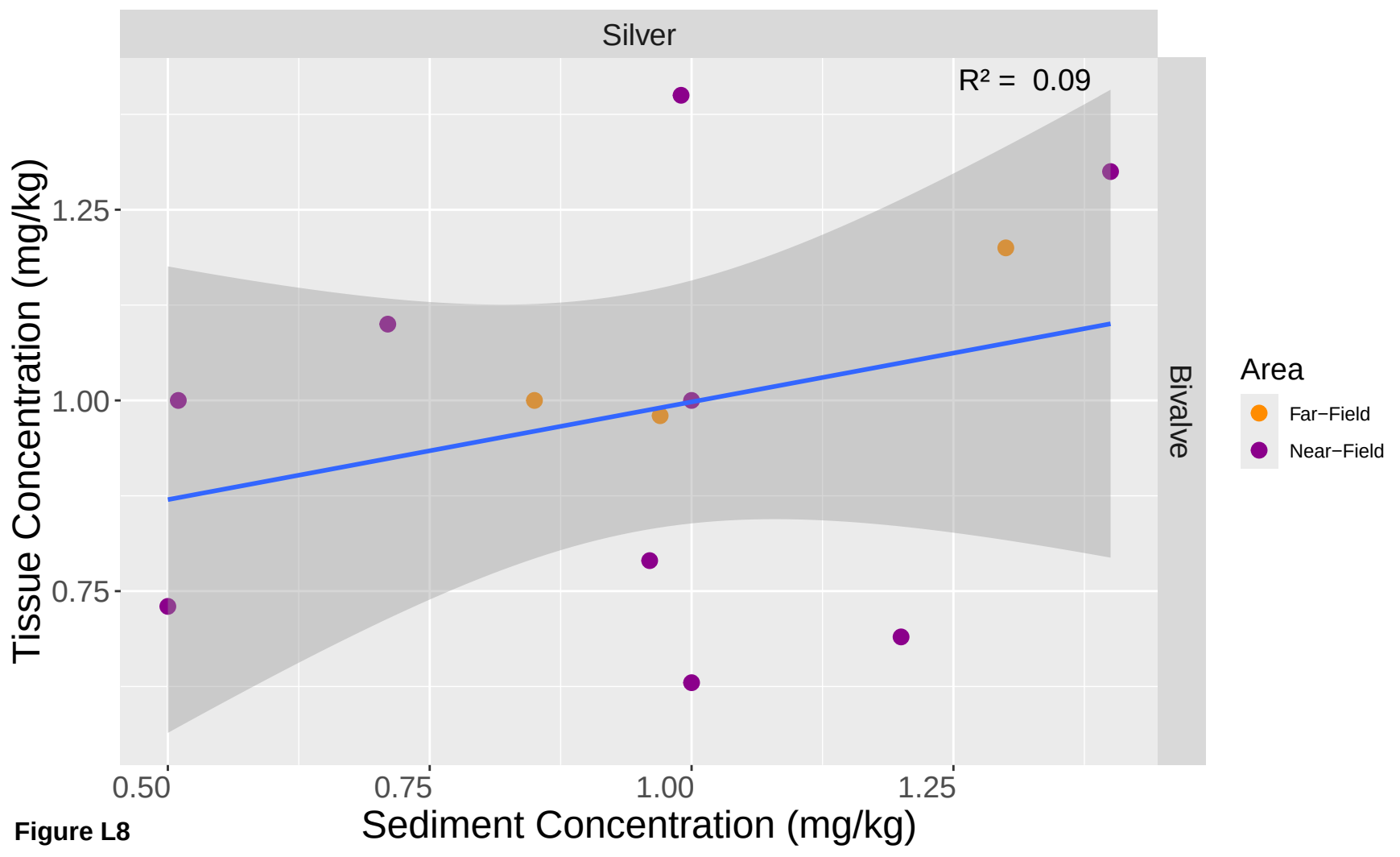
Silver
R² = 0.09
Tissue Concentration (mg/kg)
1.25
1.00
0.75
0.50
0.75
1.00
1.25
Sediment Concentration (mg/kg)
Bivalve
Area
Far−Field
Near−Field

Figure L8

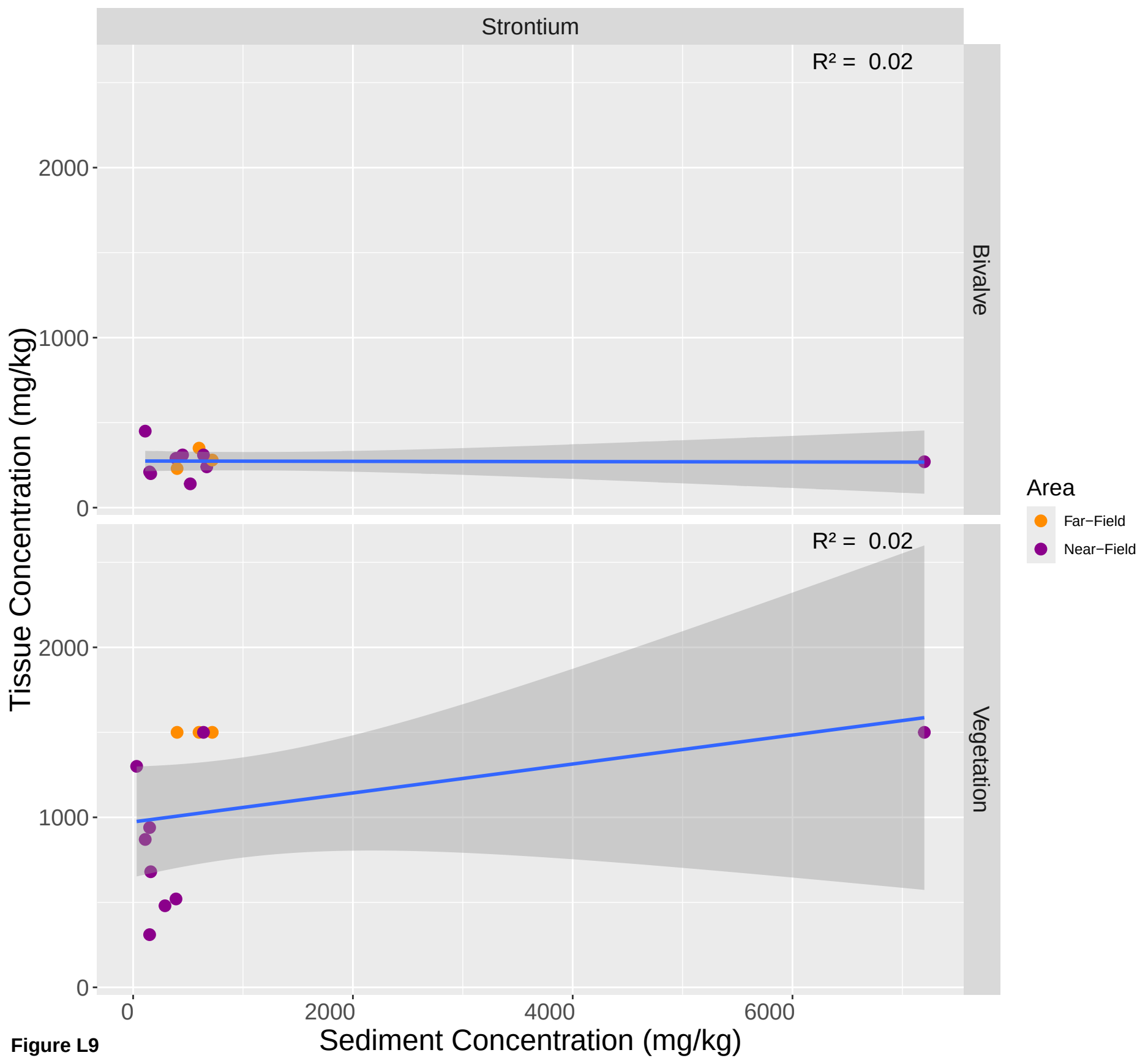
Strontium
R² = 0.02
Bivalve
R² = 0.02
Vegetation
Tissue Concentration (mg/kg)
Sediment Concentration (mg/kg)
0
1000
2000
0
2000
4000
6000
Area
Far−Field
Near−Field

Figure L9

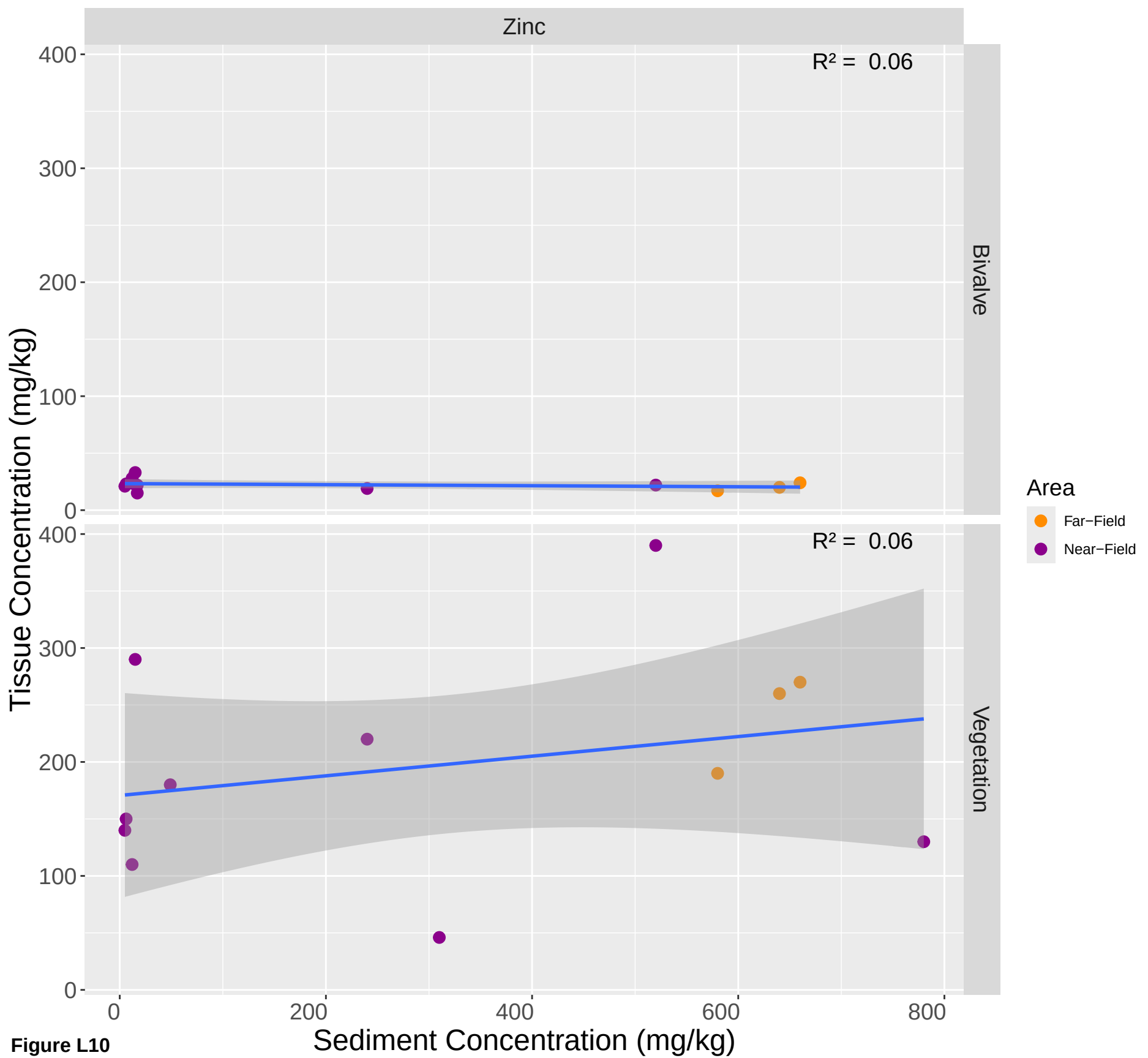
Zinc
R² = 0.06
R² = 0.06
Bivalve
Vegetation
Tissue Concentration (mg/kg)
Sediment Concentration (mg/kg)
0
100
200
300
400
0
200
400
600
800
Area
Far−Field
Near−Field

Figure L10

4.3 Conclusions

When data from the near-field locations are compared to data from far-field locations, concentrations of COPCs are generally within the same range or only marginally elevated closer to the site. Where tissue concentrations are elevated in near-field samples relative to far-field, corresponding paired sediment samples generally do not indicate that tissue concentrations are a result of uptake from the sediment (i.e., sediment concentrations correlate poorly with vegetation and/or bivalve tissue concentrations).

BENTHIC INVERTEBRATE MONITORING—SPECIES COMPOSITION AND ABUNDANCE ENON LAKE, CAPE BRETON ISLAND, NOVA SCOTIA

JULY 2024

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INTRODUCTION

Dillon Consulting Limited is monitoring environmental conditions within immediate areas of a mine site, which is situated near a lake body (Enon Lake) and several small watercourses in the community of Enon, Cape Breton Island, Nova Scotia. As part of the program Envirosphere Consultants Ltd. Windsor, Nova Scotia was contracted to coordinate water quality and benthic invertebrate sampling within the study area and provide a preliminary analysis of conditions including species composition and benthic community indicator measurements. Results of this monitoring will be used to assess change or stability in aquatic invertebrate communities in relation to potential impacts of the mine on lake and stream environments. The results of the sampling event are presented in this report.

METHODS

Field Survey

A site visit and survey took place on May 28, 2024. Fifteen benthic samples in total were taken in surface waters within the study area; each sample location was pre-selected by Dillon Consulting, to provide information on conditions in the vicinity of a mine site (Figure 1). Included were locations in Enon Lake considered to be 'reference sites'—sites which represent natural conditions and 'exposure sites'—sites near potential outflow from the mine, with which the results could be compared. Benthic samples were collected at 12 lake sites including: three reference sites (BG1-INV01, BG2-INV02, and BG3-INV03) and nine other sites, situated closer to the mine and its potential outflow (INV04, INV05, INV06, INV07, INV08, INV09, INV10, INV11, INV12). Watercourses upgradient from the lake were also sampled including: watercourse 1 (WC-1), watercourse 2 (WC-2) and watercourse 3 (WC-3). Water quality sampling occurred at several lake sampling locations (BG1-INV01, INV-08 and INV-12) and at all watercourse locations. At each watercourse site physical characteristics were recorded, including substrate type, stream cover (% shade and % overhang), bank type and stability, depth and width. A general description of the lake shoreline was also documented. Photographs of watercourse sampling locations as well as the shoreline of Enon Lake were taken. Sampling of watercourses was conducted by environmental biologist Heather Levy (B.Sc. Bio. & Env. Sci. (Hons)) and field technician Johannah Eisnor. Sampling within the lake was conducted by a diving crew obtained by Dillon Consulting.

Sampling and sample processing followed standard procedures at each site. Temperature, dissolved oxygen, and specific conductivity were measured with an YSI Model 85 handheld oxygen meter[1] and pH with a handheld pH pen[2]. A water sample was taken for analysis of total suspended solids (TSS) which was analyzed at Envirosphere's CALA accredited laboratory. Aquatic invertebrates in the streambed at the watercourse sites were sampled by Surber sampler (30.5 x 30.5 cm) and at lake sites using an Ekman grab (15 x 15 cm) operated by a SCUBA diver. Samples were preserved immediately in 100% isopropanol diluted with water from the site to approximately 70%.

[1] The YSI meter is calibrated annually for temperature against a thermometer traceable to a US National Institute for Standards and Technology (NIST) standard and specific conductivity is checked regularly against certified reference standards.

[2] A pocket pH meter Oakton pHTestr ® 5 Waterproof was used.

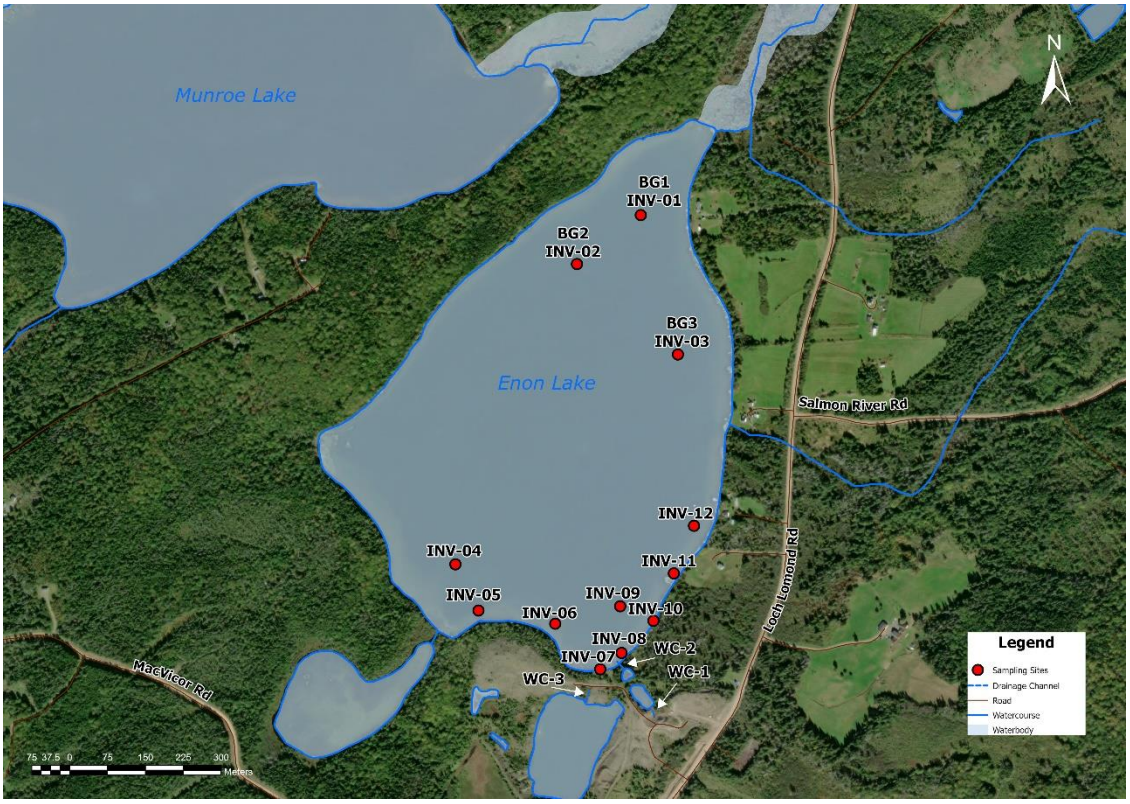

Figure1. Sampling locations within Enon Lake and watercourses within the subject property.

Sample Processing

Sieving of Samples

Samples were stored prior to analysis and during processing, washed over a 0.5 mm mesh sieve to remove silt and clay. All samples were processed at 100% with the exception of WC-2, which was sub-sampled during the sorting and identification stage.

Sub-Sampling

Sub-sampling ensures efficient processing time and selection of adequate numbers of organisms for analysis (i.e., 300+ organisms). Depending on the sample volume and the expected number of organisms' present, samples designated for sub-sampling are manually divided to give equal specific fractions of the original sample (e.g., 1/2). All fractions produced during sub-sampling are weighed and verified to be equivalent (i.e., within 0.5 to 1.0 g). Final counts for the sub-samples are extrapolated to 100%, based on the sub-sample percentage. Sub-sampling can affect measures of animal abundance by increasing variability compared to whole samples.

Sorting and Identification

Samples were examined at 6.4 to 10 x magnification on a stereomicroscope, with a final brief check at 16x and all organisms were removed from sorted portions. Removal efficiency for lab personnel is checked by

resorting 10% of samples to ensure a sorting efficiency of 90% or better. Organisms were subsequently stored in labeled vials in 70% isopropyl alcohol.

Organisms were identified to an appropriate taxonomic level, using conventional literature for the groups involved (Appendix 1). Organisms were identified by Kyra Scott (B.Sc.) and Heather Levy (B.Sc. Hons.) of Envirosphere Consultants Ltd.

Summary Statistics

Enumeration of the contained animals by sample site and total number of animals for each taxonomic group were determined. These numbers were used to calculate several indices of benthic community health, which can be compared between sites and over time at each site (an index of community health is like a body mass index or an IQ, which gives a single number which can be used for comparison). Indices calculated include:

- EPT ratio (ratio of abundance of mayflies (Ephemeroptera), stoneflies (Plecoptera), and caddisflies (Trichoptera), to total numbers of organisms)
- Total Abundance (number of animals in the sample)
- Taxon Richness (number of taxa per sample)
- Hilsenhoff Biotic Index (HBI) (an estimate of overall tolerance of the community in a sample area, weighted by the relative abundance of each taxonomic group).

All organisms present were included in abundance and taxon richness estimates, with the exception of meiofauna (Nematodes, Cladocera, Ostracods, etc.). Abundance in Surber and Ekman Grab samples are expressed on a per square meter basis.

Similarity of sites in terms of biological species composition was assessed by Cluster Analysis using the Bray-Curtis Similarity Index. The index compares the samples based on the lesser abundance of taxonomic groups that occur at both sample sites and the total abundance of all taxonomic groups. The Bray-Curtis Similarity Index is used to develop a Cluster Analysis, which depicts sample site groupings based on their relative measure of similarity.

The Bray-Curtis Similarity Index is defined as:

BCij = 2Cij / Si + Sj; where
Cij = the sum of the lesser values for only those species in common between both sites;
Si and Sj = the total number of specimens counted at both sites

The ln (x + 1) transformation was applied to the biological abundance data to normalize the data and 'group average' sorting was employed for the similarity analysis using the PRIMER software package (Clarke and Warwick 2001). Dominant taxa in all samples were assessed by using the SIMPER module of the Primer software package which determines the taxa which are most responsible for the similarities between communities at the different sites (Clarke and Warwick 2001).

SITE DESCRIPTIONS

WATERCOURSES

Three relatively small watercourses were sampled during the May survey. Site descriptions including location information and physical characteristics for stream habitat at each sampling location are presented below and summarized in Tables 1a and b. Site photos for locations are presented at the end of the report.

Watercourse 1 (WC-1)

Watercourse 1 is a narrow and short section of stream between two culverts with smalls ponds both above and below each culvert. Sampling site WC-1 is a riffle having a bottom substrate of gravelly sand and fines. The stream channel was 5-25% shaded by a mixed coniferous/deciduous canopy, dominated by willow and alder shrubs. Overhanging vegetation at the site was nearly absent. Fish were observed above the riffle during sampling, and had been previously observed there by other field personnel on the project. Some woody debris was present instream as well as algae below the riffle. The channel stability was low with erosion along both banks. Vegetation on banks was sparse and comprised of horsetail, iris, dandelions, rushes, coltsfoot, wild strawberry, and vetch. Wet width was 1 m and mid-channel depth was approximately 3.8 cm. Water temperature was 9.6 °C, dissolved oxygen was high at 10.4 mg/L, pH slightly above neutral at 7.1, and TSS levels were low (<1.0 mg/L). The water was clear, with some iron precipitate and manganese sheen seen around the waters edge.

Watercourse 2 (WC-2)

Watercourse 2 is the outlet of a pond, which flows into Enon Lake. Bottom substrate was predominately gravel intermixed with cobble and occasional fines. The stream channel was 25-50% shaded by a mixed coniferous/deciduous canopy, dominated by spruce trees and alder shrubs. This site had moderate overhanging vegetation with 25-50% cover. Root wads, some woody debris, and emergent vegetation were present in the stream. The channel stability was low with erosion along both banks. Vegetation on banks was comprised of horsetail, dandelion, grasses, coltsfoot, wild strawberry, and mint. Wet width was 30 cm and mid-channel depth was approximately 3 cm. Water temperature was 15.7 °C, dissolved oxygen was 8.4 mg/L, pH was above neutral at 7.5, and TSS levels were low (4.0 mg/L). The watercourse was mostly a short riffle having a small section of run. The water was clear.

Watercourse 3 (WC-3)

Watercourse 3 is a short run at the outlet of a wetland. The site substrate within the run was largely comprised of silt. Abundant emergent vegetation, dominated by sedges, as well as occasional horsetail, bedstraw, wild strawberry, and cattails was present instream. Old vegetative growth was present alongside the channel and new growth (i.e., sedges) contributed to extensive overhanging vegetation. The banks have poor stability and the channel is poorly developed. Adjacent areas were sparsely populated by tamarack and spruce trees, contributing overall to 5-25% shading. Wet width was 31 cm with a mid-channel depth of approximately 18 cm. Water temperature was 14.6 °C, dissolved oxygen was 4.0 mg/L, pH was slightly above neutral at 7.6, and TSS levels were 13.0 mg/L.

ENON LAKE

The surrounding area of Enon Lake is a mix of rural, urban and forested landscape. The mine is situated on upland immediately southeast of the lake and cottages and associated landscaped areas are along the eastern shoreline. Forested areas include black spruce, balsam fir, white spruce, white pine, trembling aspen, red maple, larch and various birch species, which predominately border the western and northern shorelines.

Sampling was conducted in various locations and depths within the lake; however, samples were typically collected from an area with a soft bottom substrate (i.e., muddy/present with silt/clay). Water temperature ranged from 16.1-20.4°C, dissolved oxygen was 9.5-9.6 mg/L, pH above neutral at 7.3, and TSS levels were low (<1.0-9.5 mg/L) (Table 1b).

RESULTS AND DISCUSSION

Water Quality

Standard water quality measurements were made at watercourse locations as well as several lake sampling sites (INV-01, INV-08 and INV-12). Warm water temperatures characteristic of the time of year, low to high dissolved oxygen values, low to moderate conductivity, low TSS values, and pH values ranging from 7.1 to 7.6 (Table 1b) were observed within the area. Waters were suitable for aquatic life based on the Freshwater Aquatic Life (FAL) guidelines according to temperature, dissolved oxygen (with the exception of site WC-3), pH and TSS values determined during the survey (CCME 1999; DFO 2012).

Benthic

Sediment descriptions for samples are presented in Table 2. Species identifications, abundance, taxon richness and index measures are presented in Table 3. A cluster diagram based on the Bray Curtis Index, showing groupings of samples, with a similarity of benthic organism composition is displayed in Figure 2.

In May 2024, the invertebrate community in lake sediment samples (i.e. Ekman grab samples INV-01 to INV-12) consisted predominantly of Diptera (fly) larvae, principally midges (Chironomidae)(most abundant taxon overall) and biting midges (Ceratopogonidae); and Gastropoda (snails) in families Lymnaeidae and Planorbidae, which occurred at most sample sites (i.e. in 10 to 12 samples, respectively). Other taxa occurring at more than seven sites and in moderate abundance included the Sphaeriid clam *Pisidium* sp, the mayfly nymph (Ephemeroptera, *Hexagenia*), and the Amphipod *Hyalella azteca*. Minor numbers of various other organisms occurring in one or more samples included water mites (Hydrachnidia), caddisfly larvae (Trichoptera)(*Oecetis*), dragonfly and damselfly nymphs (Odonata, *Gomphus* and *Enallagma*), Ephemeroptera (*Caenis*), leeches (Hirudinida), freshwater mussels (Unionidae) and aquatic worms (Oligochaetes). Highest overall abundance was observed at Site INV-09 at 17,138.4 organisms/m^2 ; Sites INV-05 and INV-09 both had the highest taxon richness in samples, 14 taxa per sample. Overall, abundance was low to high, ranging from 977 to 17,138 individuals/m^2 [lowest at INV-06); and taxon richness at site was low to moderate (5 – 14 taxa) (Table 3).

Samples collected from watercourses (i.e. Surber samples, sites WC-1 to WC-3) were predominantly Diptera (fly) larvae, midges (Chironomidae) and biting midges (Ceratopogonidae) at sites WC-1 and WC-3 while caddisfly nymphs were the dominant species at site WC-2. Minor numbers of other species included mayfly larvae (Ephemeroptera), stonefly larvae (Plecoptera), dragonfly/damselfly larvae (Odonata), the amphipod *Hyalella azteca,* riffle beetles (Coleoptera), water mites (Hydrachnidia), the occasional mollusk (bivalves, clams and gastropods, snails), and aquatic worm (oligochaete). Highest abundance was observed in the sample from WC-1 with 3,872 individuals/m^2. Highest taxon richness occurred in the WC-3 sample, with 14 taxa. Overall, abundance was moderate, ranging from 1,903 to 3,872 individuals/m^2 [lowest at WC-3); and taxon richness at sites was low to moderate (and 9 – 14 taxa) (Table 3).

EPT RATIO

EPT ratios ranged from 0 to 6.9% in lake samples, reflecting the general absence of mayflies, stoneflies and caddisfly larvae/nymphs at these sites. EPT ratios were low to moderate at watercourse sites, ranging from 4.0 – 62.4% (Table 3).

HBI

The Hilsenhoff Biotic Index ranged from 5.72-6.40 at lake sampling sites indicating fair to fairly poor water quality. The index at watercourse locations ranged from 4.50-5.50 indicating fair to very good water quality. (Table 3).

Cluster Analysis

Similarity (cluster) analysis showed the presence of the different 'stream' versus 'lake' invertebrate communities. Watercourse samples formed Group C (Figure 2)(samples WC-2 and WC-3) but they had a low level of Bray-Curtis similarity. Sample WC-1 was an outlier, not at all similar to any of the other samples, having only 2 taxa (biting midges Ceratopogonidae and midges Chironomidae) in common with the other watercourse sites. Together, WC-2 and WC-3 had only 5 taxa in common which accounted for the similarity (Ceratopogonidae, Chironomidae, the caddisfly nymph (Trichoptera, *Hydropsyche*, *Cheumatopsyche),* riffle beetles larvae (Elmidae, *Stenelmis*) and the amphipod *Hyalella azteca*.

Benthic communities in the lake samples were in two main groups (A and B, Figure 2) based on similarity. Within Group A, which contained samples INV-06, INV-03 and INV-10 and had average in-group similarity of 68.2%, the communities in the latter two samples showed the highest similarity of any pair of samples in the study (82.0 %), mainly because of the common occurrences at similar abundance of several species of molluscs (clams and snails) and high abundances of Chironomidae and Ceratopogonidae. Sample INV-06 which, was the remaining sample in Group A, had a lower abundance of these taxa, accounting for the lower similarity with the others.

The remaining lake samples formed Group B, which contained three groups based on community similarity (B_1, B_2 and B_3) and which had average in-group similarities of 73.9%, 70.7% and 69.9% respectively. These all contained a core of similar species, but differed in having one or more taxa which were particular to the group. Group B_1, (samples INV-11 and INV-12) with an average similarity of 73.9% shared the common species and similar abundance of Chironomidae and Ceratopogonidae, Lymnaeid snails, the amphipod *Hyalella azteca*, Sphaeriid clams (*Pisidium),* a mayfly species (Ephemeroptera, Caenidae, *Caenis*), and unidentified Diptera (fly) pupae were present. Group B_2 (INV7, INV8 and INV9) had the same three

dominant taxa as Group B_1 (Chironomidae, Ceratopogonidae, Lymnaeidae and *Hyalella azteca*) but with the mayfly (Ephemeroptera, Ephemeridae, *Hexagenia*) also dominant. The community in Group B_3, in addition to the taxa in Group B_2 included Planorbid snails and Sphaeriid and Unionid clams as important, all present and having similar abundance, but the mphipod *Hyalella azteca* was not present in Group B_3. The one lake sample which did not group with the others (INV-01, Figure 2) had only a small number of taxa which were the dominant taxa found in the other lake samples (i.e. Chironomidae, Ceratopogonidae, Diptera pupae, Sphaeriid (*Pisidium*) clams and Planorbid snails).

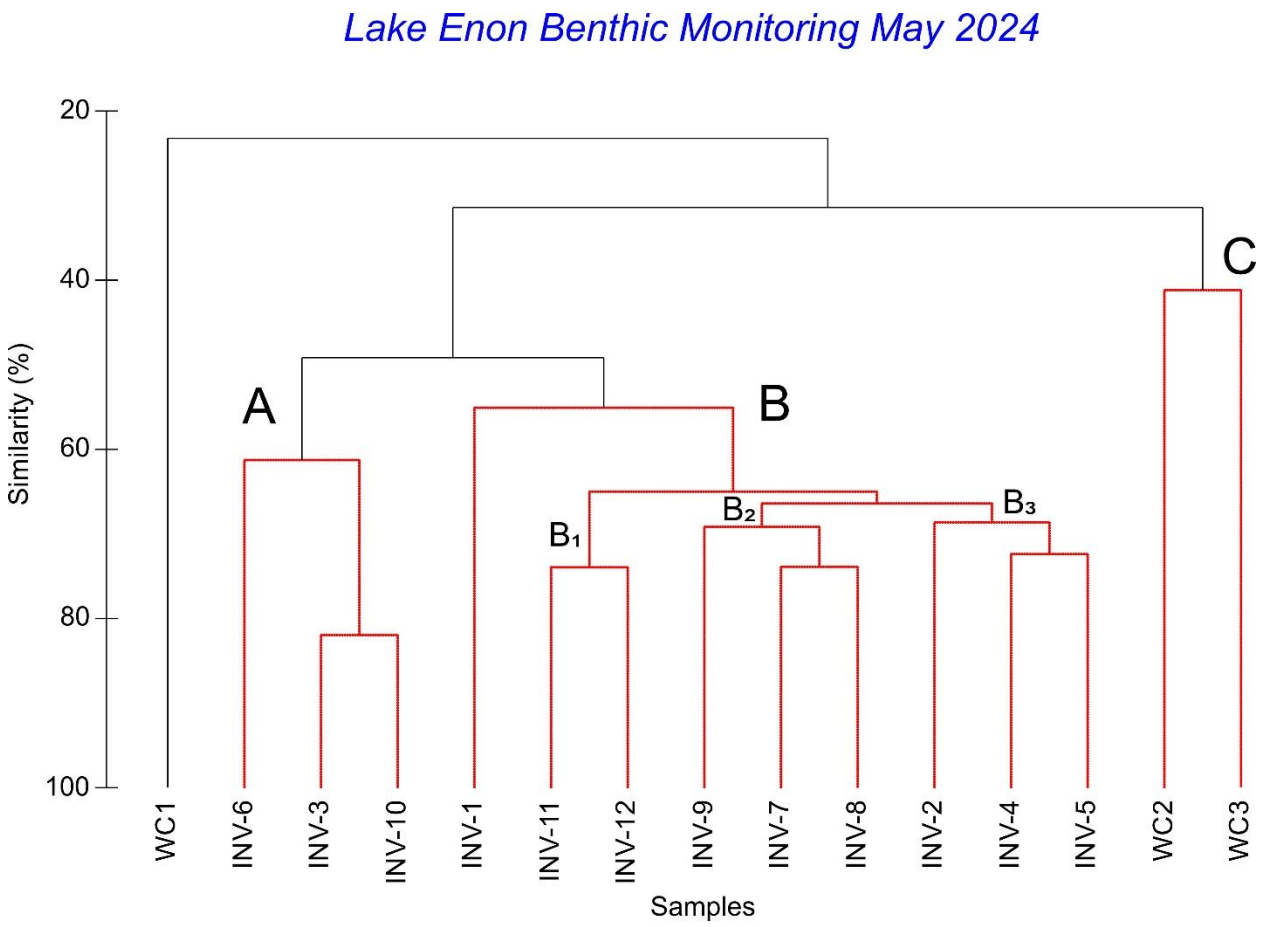

Figure 1. Similarity of benthic invertebrate communities in Enon Lake and associated watercourses based on Bray-Curtis Index of similarity, May 2024.

CONCLUSION

Benthic communities contained a low to high abundance at lake sites and a moderate abundance of invertebrate taxa at watercourse locations. Overall, a low to moderate diversity was present. EPT ratios were low in lake samples and low to moderate at watercourse sites. The Hilsenhoff Index generally indicated fair to fairly poor water quality within the lake and fair to very good quality at watercourses sites.

High HBI values and low EPT ratios at lake sites, however, is largely due to habitat conditions that differed from those at watercourse locations. Waters were generally suitable for aquatic life according to Freshwater Aquatic Life (FAL) guidelines.

REFERENCES

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Limiting Conditions

The quality of the results presented in this report are dependent both on our analyses, and on the quality of samples as provided to Envirosphere Consultants Limited by the client. The analyses are based on practices normally accepted in the analysis of marine and freshwater benthic invertebrate samples and maintain suitable controls for quality assurance. No other warranty is made.

SITE PHOTOS, MAY 2024

ENON LAKE

Photo 1. Enon Lake, May 28, 2024. *Top photos*, looking south and north (left and right photos, respectively) along the eastern shoreline. *Bottom left photo*, looking northward at reference sampling locations. *Bottom right photo*, gravelly substrate at boat launch area in Enon Lake.

WATERCOURSES

Photo 2. Watercourse 1 (Site WC-1), upstream view, May 28, 2024.

Photo 3. Watercourse 1 (Site WC-1), downstream view, May 28, 2024.

Photo 4. Watercourse 1 (Site WC-1), substrate, May 28, 2024.

Photo 5. Watercourse 2 (Site WC-2), upstream view, May 28, 2024.

Photo 6. Watercourse 2 (Site WC-2), downstream view looking toward Lake Enon, May 28, 2024.

Photo 7. Watercourse 2 (Site WC-2), substrate, May 28, 2024.

Photo 8. Watercourse 3 (Site WC-3), upstream view, May 28, 2024.

Photo 9. Watercourse 3 (Site WC-3), downstream view, May 28, 2024.

Photo 10. Watercourse 3 (Site WC-3), substrate, May 28, 2024.

TABLES

Table 1a. Location information and physical characteristics for stream habitat at benthic invertebrate monitoring sites, Enon, Cape Breton, May 28, 2024.

Site	Location[1] (UTM Zone 20T)		Habitat Type	Width		Mid-Channel Depth (m)	Bottom Substrate	Cover				Notes
	Northing	Easting		Channel Width (m)	Wet Width (m)			Canopy/ Shade	Understory	Overhang Vegetation	Other	
WATERCOURSES												
WC-1	0691206	5075445	Riffle above flat	2.25	1.0	0.04	80% gravel, 15% sand, 5% silt	Willow, alder, spruce and larch 5-25%	Alder and willow shrubs. Horsetail, iris, dandelion, rushes, coltsfoot, wild strawberry, and vetch.	Nearly absent	Algae below riffle, and woody debris. Iron precipitate and manganese sheen present.	Fish present.
WC-2	0691134	5075546	Riffle/Run	1.9	0.3	0.03	15% cobble, 80% gravel, 5% silt	Spruce 25-50%	Alder and cherry shrubs. Horsetail, wild strawberry, grasses, coltsfoot, dandelions, and mint.	25-50%	Woody debris, emergent macrophytes, and root wads.	Adjacent to lake shoreline.
WC-3	0691077	5075501	Run/ Pool	8	0.31	0.18	100% silt	Larch and spruce 5-25%	Willow shrubs. Sedges, cattails, horsetails, bedstraw, wild strawberry, speedwell, sedges and bugleweed.	>50%	Instream debris, undercut banks, and pools.	Below wetland area.

Table 1b. Water quality measurements at benthic invertebrate monitoring sites, Enon, Cape Breton, May 28, 2024.
Bolded values indicate an exceedance of Freshwater Aquatic Life Guidelines.

Site Location	WC 1	WC-2	WC-3	(BG1) INV01	INV08	INV12	Freshwater Aquatic Life Guideline
Water Temperature (°C)	9.6	15.7	14.6	16.3	20.4	16.1	<20°C*
Dissolved Oxygen (mg/L)**	10.32	8.35	**3.96**	9.53	8.84	9.64	>6.5; >9.5 mg/L†
Specific Conductivity (µS/cm)	86.5	129.1	213.7	122.3	-	-	-
pH	7.1	7.5	7.6	7.3	7.3	7.3	6.5 to 9†
Total Suspended Solids (mg/L)	<1.0	4.0	13.0	<1.0	9.5	1.5	<25 mg/L†

* Thresholds of 20° C are used as indicators of stress to aquatic species, particularly salmonids (DFO 2012).
** specific conductivity could not be determined at site INV08 and INV12, due to instrument malfunction.
CCME, Canadian Council of Ministers of the Environment. 1999. >9.5 *mg/L early life stages; >6.5 mg/L other, cold water ecosystems.*
† CCME, Canadian Council of Ministers of the Environment. 1999.

Table 2. Characteristics of Surber and Ekman grab samples, Enon, Cape Breton, May 28, 2024

WATERCOURSES	
WC-1	Gravel and sand with organic matter (plant and woody debris).
WC-2	Gravel and sand with organic matter (leaves and grass).
WC-3	Sand and fines with organic matter (woody and plant debris).
ENON LAKE	
INV-01	Organic (plant) matter, fines and sand.
INV-02	Organic (plant) matter, freshwater mussels, fines and sand.
INV-03	Organic (plant) matter, shell debris, fines and sand.
INV-04	Organic (plant) matter, fines, sand, and freshwater mussels.
INV-05	Organic (plant) matter, fines, sand, and freshwater mussels.
INV-06	Organic (plant) matter, fines, sand, and gravel.
INV-07	Organic (plant) matter, fines and freshwater mussels.
INV-08	Organic (plant and woody debris) matter, fines and freshwater mussels.
INV-09	Organic (plant) matter, fines and freshwater mussels.
INV-10	Organic (plant) matter, fines and sand.
INV-11	Organic (plant and woody debris) matter, and fines.
INV-12	Organic (plant) matter and fines.

Grain size classes: cobble = 6.4 cm and larger; pebble/ gravel = 2 mm to 6.4 cm; sand = 0.063 mm to 2 mm; silt = 0.004 mm to 0.063 mm; clay = <0.004 mm.

Table 3. Abundance of benthic organisms in sediments from Enon Lake and associated watercourses, May 28, 2024.

Date Sampled			Ekman Grab Samples (number/m²)												Surber Samples (number/m²)		
			May 28th 2024												*May 28th, 2024*		
Subsample (%)			100%												100%	50%	100%
Phylum & Class Order	Family	Genus & Species	Site INV-												Site WC-1		
			01	02	03	04	05	06	07	08	09	10	11	12	1	2	3
Arthropoda Insecta																	
Diptera																	
	Ceratopogonidae	unidentified	89	44	400	266	311	44	311	266	1154	622	178	178	11	110	11
	Chironomidae	unidentified	3774	3463	2264	2398	4040	488	3996	4484	10168	4662	2575	3330	1683	968	1353
	Limoniidae	*Antocha*	0	0	0	0	0	0	0	0	0	0	0	0	33	0	0
	Simuliidae	Simulium	0	0	0	0	0	0	0	0	0	0	0	0	0	44	0
	Diptera, pupae	Indeterminate	89	44	0	89	44	0	266	89	533	0	89	44	154	0	0
Ephemeroptera																	
	Ameletidae	*Ameletus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
	Caenidae	*Caenis*	0	0	0	0	0	0	0	0	0	0	133	89	0	0	0
	Ephemerellidae	*Eurylophella*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22
	Ephemeridae	*Hexagenia*	0	0	0	133	400	0	400	178	178	44	133	0	0	0	0
		unidentified	0	44	0	0	0	0	0	0	0	0	0	0	0	0	0
	Indeterminate		0	0	0	0	0	0	0	0	0	89	0	311	0	0	0
Plecoptera																	
	Chloroperlidae	*Alloperla*	0	0	0	0	0	0	0	0	0	0	0	0	77	0	0
	Perlodidae	*Isoperla*	0	0	0	0	0	0	0	0	0	0	0	0	99	0	0
	Indeterminate	nymph	0	0	0	0	0	0	0	0	0	0	0	0	44	0	0
	Indeterminate	pupae	0	0	0	0	0	0	0	0	0	0	0	0	33	0	0
Trichoptera																	
	Hydropsychidae	*Cheumatopsyche*	0	0	0	0	0	0	0	0	0	0	0	0	0	1276	44
		Hydropsyche	0	0	0	0	0	0	0	0	0	0	0	0	0	198	0
	Leptoceridae	*Ceraclea*	0	0	0	0	44	0	0	0	0	0	0	0	0	0	0
		Oecetis	0	0	44	0	0	0	0	0	89	0	0	0	0	0	0
	Philopotamidae	*Chimarra*	0	0	0	0	0	0	0	0	0	0	0	0	0	528	0

Table 3. Abundance of benthic organisms in sediments from Enon Lake and associated watercourses, May 28, 2024.

Date Sampled			Ekman Grab Samples (number/m²)												Surber Samples (number/m²)		
			May 28th 2024												*May 28th, 2024*		
Subsample (%)			100%												100%	50%	100%
Phylum & Class Order	Family	Genus & Species	Site INV-												Site WC-1		
			01	02	03	04	05	06	07	08	09	10	11	12	1	2	3
	Phryganeidae	*Agrypnia*	0	44	0	0	0	0	0	0	0	0	0	0	0	0	0
	Polycentropodidae	*Polycentropus*	0	44	0	0	0	0	0	0	44	0	0	0	0	0	0
	Rhyacophilidae	*Rhyacophila*	0	0	0	0	0	0	0	0	0	0	0	0	55	0	0
	Indeterminate		0	0	0	0	0	0	44	0	0	0	0	0	0	44	0
Odonata																	
	Aeshnidae	*Boyeria*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
	Coenagrionidae	*Enallagma*	0	0	0	0	44	0	0	44	0	0	0	0	0	0	11
	Gomphidae	*Gomphus*	0	0	0	0	0	0	0	44	178	0	0	0	0	0	0
	Libellulidae	Indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	242
Coleoptera																	
	Elmidae	*Oulimnius*	0	0	0	0	0	0	0	0	0	0	0	0	990	0	0
		Oulimnius (adult)	0	0	0	0	0	0	0	0	0	0	0	0	649	0	0
		Stenelmis	0	0	0	0	0	0	0	0	0	0	0	0	0	88	11
Hemiptera																	
	Aphididae	indeterminate	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Arthropoda Crustacea																	
Amphipoda																	
	Hyalellidae	*Hyalella azteca*	0	311	0	0	178	0	222	178	355	0	133	178	0	22	143
		Indeterminate	0	89	0	0	44	0	178	266	133	0	0	89	0	0	0
Arthropoda Euchelicerata																	
Trombidiformes																	
	Hydrachnidae	species A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
		species B	0	0	0	0	0	0	89	0	44	0	0	0	0	0	0
Mollusca Bivalvia																	
Unionida																	

Table 3. Abundance of benthic organisms in sediments from Enon Lake and associated watercourses, May 28, 2024.

Date Sampled			Ekman Grab Samples (number/m²)												Surber Samples (number/m²)		
			May 28th 2024												*May 28th, 2024*		
Subsample (%)			100%												100%	50%	100%
Phylum & Class Order	**Family**	**Genus & Species**	Site INV-												Site WC-1		
			01	02	03	04	05	06	07	08	09	10	11	12	1	2	3
	Unionidae	Indeterminate	0	89	0	44	89	0	133	0	0	0	44	0	0	0	0
Veneroida																	
	Sphaeriidae	*Pisidium*	222	710	0	44	44	0	222	0	755	0	133	311	0	0	0
	Indeterminate	juvenile	0	0	400	0	0	0	0	0	0	400	0	0	0	0	11
Mollusca Gastropoda																	
	Lymnaeidae	Indeterminate	0	133	222	44	1066	355	577	1243	1598	400	1288	178	0	0	0
	Planorbidae	Indeterminate	266	488	311	89	222	44	0	0	89	622	44	133	0	0	11
	Physidae	*Physa*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Annelida Clitellata																	
Aquatic Worms (formerly Oligochaeta)																	
	unidentified		0	0	0	44	311	44	0	0	1820	0	0	0	44	0	0
Hirudinida																	
	Glossiphoniidae	species A	0	0	0	0	44	0	0	0	0	0	44	0	0	0	0
SUMMARY																	
Abundance (#/m²)			4484	5506	3641	3152	6882	977	6438	6793	17138	6838	4795	4840	3872	3278	1903
Taxa Richness (Families)			6	12	6	9	14	5	11	9	14	7	11	10	12	9	14
Total EPT: Total (%)			0.0	2.4	1.2	4.2	6.5	0.0	6.9	2.6	1.8	1.9	5.6	8.3	8.0	62.4	4.0
HBI *(based on family)*			5.98	6.40	6.06	5.79	6.00	6.14	5.72	5.97	6.10	5.99	5.94	5.83	4.50	4.50	5.50
Excluded and Non-aquatic Taxa (not included in analyses)																	
	Arachnida		0	0	0	0	0	0	0	0	44	0	0	0	0	0	11
	Cladocera, Cyclopidae		0	44	0	0	0	0	0	0	0	0	0	0	0	0	2420
	Copepoda, Calanoida		44	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Dytiscidae (cast)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Nematoda		0	44	0	0	222	0	44	0	89	0	0	133	0	0	0
	Ostracoda		0	0	0	0	0	0	0	0	0	0	0	0	0	0	11

Appendix 1. Taxonomic Literature

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Your Project #: 22-3723
Site Location: LAKE ENON
Your C.O.C. #: 968418-01-01

Attention: Nadine Wambolt

Dillon Consulting Limited
275 Charlotte St
Sydney, NS
CANADA B1P 1C6

Report Date: 2024/04/30
Report #: R8128821
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4C0104
Received: 2024/04/23, 13:41

Sample Matrix: Sediment
Samples Received: 9

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Metals Solids Acid Extr. ICPMS (1)	5	2024/04/25	2024/04/25	ATL SOP 00058	EPA 6020B R2 m
Metals Solids Acid Extr. ICPMS (1)	4	2024/04/25	2024/04/26	ATL SOP 00058	EPA 6020B R2 m
Moisture (1)	8	N/A	2024/04/25	ATL SOP 00001	OMOE Handbook 1983 m
Grain Size - Calculated (1)	8	N/A	2024/04/29		
Particle Size (Sieve), Sieve/pan 75um (1)	8	N/A	2024/04/29	ATL SOP 00053	ASTM D1140-17 m
Total Organic Carbon in Soil (1)	9	2024/04/29	2024/04/29	ATL SOP 00044	LECO203601224 1991 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Bedford, 200 Bluewater Rd Suite 105, Bedford, NS, B4B 1G9

Your Project #: 22-3723
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275 Charlotte St
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Report Date: 2024/04/30
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CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4C0104
Received: 2024/04/23, 13:41

Encryption Key

Bureau Veritas
30 Apr 2024 09:07:34

Please direct all questions regarding this Certificate of Analysis to:
Natalie MacAskill, Key Account Specialist
Email: Natalie.MacAskill@bureauveritas.com
Phone# (902)567-1255 Ext:17

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Bureau Veritas Job #: C4C0104
Report Date: 2024/04/30

Dillon Consulting Limited
Client Project #: 22-3723
Site Location: LAKE ENON
Sampler Initials: JM

RESULTS OF ANALYSES OF SEDIMENT

Bureau Veritas ID		YYX228			YYX229			YYX230		
Sampling Date		2024/04/18 14:45			2024/04/18 12:35			2024/04/18 13:35		
COC Number		968418-01-01			968418-01-01			968418-01-01		
	UNITS	WC1	RDL	QC Batch	WC2	RDL	QC Batch	WC3	RDL	QC Batch
Calculated Parameters										
Grain Size	N/A	COARSE	N/A	9350319				COARSE	N/A	9350319
Inorganics										
Moisture	%	21	1.0	9351953				38	1.0	9351953
Organic Carbon (TOC)	g/kg	22	0.50	9361118	11	0.50	9361118	18	0.50	9361118
Sieve - #200 (>0.075mm)	%	91	1	9354837				80	1	9354837
Sieve - Pan	%	9	1	9354837				20	1	9354837

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

Bureau Veritas ID		YYX231	YYX232	YYX233	YYX234		
Sampling Date		2024/04/18 15:36	2024/04/18 15:42	2024/04/18 15:47	2024/04/18 15:55		
COC Number		968418-01-01	968418-01-01	968418-01-01	968418-01-01		
	UNITS	WETLAND #3A-0.75M	WETLAND #3B-0.75M	WETLAND #3C-0.55M	WETLAND #3D-0.65M	RDL	QC Batch
Calculated Parameters							
Grain Size	N/A	FINE	FINE	FINE	FINE	N/A	9350319
Inorganics							
Moisture	%	23	25	24	25	1.0	9351953
Organic Carbon (TOC)	g/kg	15	15	14	16	0.50	9361118
Sieve - #200 (>0.075mm)	%	14	40	11	7	1	9354837
Sieve - Pan	%	86	60	89	93	1	9354837

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

Bureau Veritas 465 George St., Unit G, Sydney, NS, B1P 1K5 Tel:902 567 1255 Toll Free: 888 535 7770 Fax: 902 539 6504 www.bvna.com

Bureau Veritas Job #: C4C0104
Report Date: 2024/04/30

Dillon Consulting Limited
Client Project #: 22-3723
Site Location: LAKE ENON
Sampler Initials: JM

RESULTS OF ANALYSES OF SEDIMENT

Bureau Veritas ID		YYX235	YYX236		
Sampling Date		2024/04/18 16:05	2024/04/18		
COC Number		968418-01-01	968418-01-01		
	UNITS	WETLAND #3E-0.65M	WETLAND #3-DUPA	RDL	QC Batch
Calculated Parameters					
Grain Size	N/A	FINE	COARSE	N/A	9350319
Inorganics					
Moisture	%	25	39	1.0	9351953
Organic Carbon (TOC)	g/kg	11	14	0.50	9361118
Sieve - #200 (>0.075mm)	%	49	50	1	9354837
Sieve - Pan	%	51	50	1	9354837

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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Bureau Veritas Job #: C4C0104
Report Date: 2024/04/30

Dillon Consulting Limited
Client Project #: 22-3723
Site Location: LAKE ENON
Sampler Initials: JM

ELEMENTS BY ATOMIC SPECTROSCOPY (SEDIMENT)

Bureau Veritas ID		YYX228	YYX229	YYX230		YYX231		
Sampling Date		2024/04/18 14:45	2024/04/18 12:35	2024/04/18 13:35		2024/04/18 15:36		
COC Number		968418-01-01	968418-01-01	968418-01-01		968418-01-01		
	UNITS	WC1	WC2	WC3	RDL	WETLAND #3A-0.75M	RDL	QC Batch
Metals								
Acid Extractable Aluminum (Al)	mg/kg	8500	8500	9600	10	7300	10	9354839
Acid Extractable Antimony (Sb)	mg/kg	<2.0	<2.0	<2.0	2.0	<2.0	2.0	9354839
Acid Extractable Arsenic (As)	mg/kg	6.7	21	7.2	2.0	14	2.0	9354839
Acid Extractable Barium (Ba)	mg/kg	250	360	620	5.0	680	5.0	9354839
Acid Extractable Beryllium (Be)	mg/kg	<1.0	<1.0	<1.0	1.0	<1.0	1.0	9354839
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	<2.0	<2.0	2.0	<2.0	2.0	9354839
Acid Extractable Boron (B)	mg/kg	<50	<50	<50	50	<50	50	9354839
Acid Extractable Cadmium (Cd)	mg/kg	2.4	2.0	4.4	0.30	2.6	0.30	9354839
Acid Extractable Chromium (Cr)	mg/kg	9.7	13	14	2.0	21	2.0	9354839
Acid Extractable Cobalt (Co)	mg/kg	7.3	8.2	11	1.0	8.6	1.0	9354839
Acid Extractable Copper (Cu)	mg/kg	21	18	38	2.0	9.8	2.0	9354839
Acid Extractable Iron (Fe)	mg/kg	18000	20000	18000	50	15000	50	9354839
Acid Extractable Lead (Pb)	mg/kg	170	150	270	0.50	14000	5.0	9354839
Acid Extractable Lithium (Li)	mg/kg	13	14	18	2.0	14	2.0	9354839
Acid Extractable Manganese (Mn)	mg/kg	2300	3000	1700	2.0	2800	2.0	9354839
Acid Extractable Mercury (Hg)	mg/kg	<0.10	<0.10	<0.10	0.10	<0.10	0.10	9354839
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	<2.0	2.0	2.0	<2.0	2.0	9354839
Acid Extractable Nickel (Ni)	mg/kg	11	13	21	2.0	27	2.0	9354839
Acid Extractable Rubidium (Rb)	mg/kg	4.6	4.6	7.8	2.0	6.8	2.0	9354839
Acid Extractable Selenium (Se)	mg/kg	<0.50	0.69	1.1	0.50	<0.50	0.50	9354839
Acid Extractable Silver (Ag)	mg/kg	0.71	<0.50	1.6	0.50	2.0	0.50	9354839
Acid Extractable Strontium (Sr)	mg/kg	2500	2100	3000	5.0	360	5.0	9354839
Acid Extractable Thallium (Tl)	mg/kg	0.36	0.17	0.38	0.10	0.27	0.10	9354839
Acid Extractable Tin (Sn)	mg/kg	<1.0	<1.0	<1.0	1.0	<1.0	1.0	9354839
Acid Extractable Uranium (U)	mg/kg	1.5	1.3	2.1	0.10	0.80	0.10	9354839
Acid Extractable Vanadium (V)	mg/kg	22	28	18	2.0	12	2.0	9354839
Acid Extractable Zinc (Zn)	mg/kg	480	560	840	5.0	420	5.0	9354839

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C4C0104
Report Date: 2024/04/30

Dillon Consulting Limited
Client Project #: 22-3723
Site Location: LAKE ENON
Sampler Initials: JM

ELEMENTS BY ATOMIC SPECTROSCOPY (SEDIMENT)

Bureau Veritas ID		YYX232		YYX233	YYX234		
Sampling Date		2024/04/18 15:42		2024/04/18 15:47	2024/04/18 15:55		
COC Number		968418-01-01		968418-01-01	968418-01-01		
	UNITS	WETLAND #3B-0.75M	RDL	WETLAND #3C-0.55M	WETLAND #3D-0.65M	RDL	QC Batch
Metals							
Acid Extractable Aluminum (Al)	mg/kg	6100	10	11000	8800	10	9354839
Acid Extractable Antimony (Sb)	mg/kg	<2.0	2.0	<2.0	<2.0	2.0	9354839
Acid Extractable Arsenic (As)	mg/kg	9.4	2.0	15	14	2.0	9354839
Acid Extractable Barium (Ba)	mg/kg	1200	5.0	820	910	5.0	9354839
Acid Extractable Beryllium (Be)	mg/kg	<1.0	1.0	1.4	1.1	1.0	9354839
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	2.0	<2.0	<2.0	2.0	9354839
Acid Extractable Boron (B)	mg/kg	<50	50	<50	<50	50	9354839
Acid Extractable Cadmium (Cd)	mg/kg	1.1	0.30	2.4	2.3	0.30	9354839
Acid Extractable Chromium (Cr)	mg/kg	17	2.0	29	23	2.0	9354839
Acid Extractable Cobalt (Co)	mg/kg	7.8	1.0	11	9.7	1.0	9354839
Acid Extractable Copper (Cu)	mg/kg	5.9	2.0	12	9.3	2.0	9354839
Acid Extractable Iron (Fe)	mg/kg	13000	50	20000	17000	50	9354839
Acid Extractable Lead (Pb)	mg/kg	6100	0.50	13000	13000	5.0	9354839
Acid Extractable Lithium (Li)	mg/kg	11	2.0	20	16	2.0	9354839
Acid Extractable Manganese (Mn)	mg/kg	2400	2.0	3100	3000	2.0	9354839
Acid Extractable Mercury (Hg)	mg/kg	<0.10	0.10	<0.10	<0.10	0.10	9354839
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	2.0	<2.0	<2.0	2.0	9354839
Acid Extractable Nickel (Ni)	mg/kg	24	2.0	49	45	2.0	9354839
Acid Extractable Rubidium (Rb)	mg/kg	4.5	2.0	13	8.9	2.0	9354839
Acid Extractable Selenium (Se)	mg/kg	<0.50	0.50	<0.50	<0.50	0.50	9354839
Acid Extractable Silver (Ag)	mg/kg	0.92	0.50	2.2	1.9	0.50	9354839
Acid Extractable Strontium (Sr)	mg/kg	240	5.0	380	300	5.0	9354839
Acid Extractable Thallium (Tl)	mg/kg	0.18	0.10	0.39	0.30	0.10	9354839
Acid Extractable Tin (Sn)	mg/kg	<1.0	1.0	<1.0	<1.0	1.0	9354839
Acid Extractable Uranium (U)	mg/kg	0.50	0.10	1.4	1.0	0.10	9354839
Acid Extractable Vanadium (V)	mg/kg	9.9	2.0	18	14	2.0	9354839
Acid Extractable Zinc (Zn)	mg/kg	230	5.0	450	400	5.0	9354839

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C4C0104
Report Date: 2024/04/30

Dillon Consulting Limited
Client Project #: 22-3723
Site Location: LAKE ENON
Sampler Initials: JM

ELEMENTS BY ATOMIC SPECTROSCOPY (SEDIMENT)

Bureau Veritas ID		YYX235		YYX236		
Sampling Date		2024/04/18 16:05		2024/04/18		
COC Number		968418-01-01		968418-01-01		
	UNITS	WETLAND #3E-0.65M	RDL	WETLAND #3-DUPA	RDL	QC Batch
Metals						
Acid Extractable Aluminum (Al)	mg/kg	5100	10	7600	10	9354839
Acid Extractable Antimony (Sb)	mg/kg	<2.0	2.0	<2.0	2.0	9354839
Acid Extractable Arsenic (As)	mg/kg	9.2	2.0	12	2.0	9354839
Acid Extractable Barium (Ba)	mg/kg	1100	5.0	1100	5.0	9354839
Acid Extractable Beryllium (Be)	mg/kg	<1.0	1.0	<1.0	1.0	9354839
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	2.0	<2.0	2.0	9354839
Acid Extractable Boron (B)	mg/kg	<50	50	<50	50	9354839
Acid Extractable Cadmium (Cd)	mg/kg	1.3	0.30	1.8	0.30	9354839
Acid Extractable Chromium (Cr)	mg/kg	13	2.0	20	2.0	9354839
Acid Extractable Cobalt (Co)	mg/kg	6.8	1.0	9.1	1.0	9354839
Acid Extractable Copper (Cu)	mg/kg	6.1	2.0	8.7	2.0	9354839
Acid Extractable Iron (Fe)	mg/kg	11000	50	15000	50	9354839
Acid Extractable Lead (Pb)	mg/kg	7100	0.50	9700	5.0	9354839
Acid Extractable Lithium (Li)	mg/kg	9.5	2.0	14	2.0	9354839
Acid Extractable Manganese (Mn)	mg/kg	2200	2.0	2600	2.0	9354839
Acid Extractable Mercury (Hg)	mg/kg	<0.10	0.10	<0.10	0.10	9354839
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	2.0	<2.0	2.0	9354839
Acid Extractable Nickel (Ni)	mg/kg	21	2.0	32	2.0	9354839
Acid Extractable Rubidium (Rb)	mg/kg	4.3	2.0	7.5	2.0	9354839
Acid Extractable Selenium (Se)	mg/kg	<0.50	0.50	<0.50	0.50	9354839
Acid Extractable Silver (Ag)	mg/kg	1.0	0.50	1.5	0.50	9354839
Acid Extractable Strontium (Sr)	mg/kg	220	5.0	280	5.0	9354839
Acid Extractable Thallium (Tl)	mg/kg	0.17	0.10	0.25	0.10	9354839
Acid Extractable Tin (Sn)	mg/kg	<1.0	1.0	<1.0	1.0	9354839
Acid Extractable Uranium (U)	mg/kg	0.49	0.10	0.89	0.10	9354839
Acid Extractable Vanadium (V)	mg/kg	8.3	2.0	12	2.0	9354839
Acid Extractable Zinc (Zn)	mg/kg	230	5.0	330	5.0	9354839

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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GENERAL COMMENTS

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9351953	RD4	RPD	Moisture	2024/04/25	0.25		%	25
9354837	BBD	QC Standard	Sieve - #200 (>0.075mm)	2024/04/29		92	%	90 - 110
9354837	BBD	Method Blank	Sieve - #200 (>0.075mm)	2024/04/29	<1		%	
			Sieve - Pan	2024/04/29	100, RDL=1		%	
9354837	BBD	RPD [YYX228-01]	Sieve - #200 (>0.075mm)	2024/04/29	1.5		%	25
			Sieve - Pan	2024/04/29	14		%	25
9354839	MTZ	Matrix Spike [YYX233-02]	Acid Extractable Antimony (Sb)	2024/04/25		91	%	75 - 125
			Acid Extractable Arsenic (As)	2024/04/25		94	%	75 - 125
			Acid Extractable Barium (Ba)	2024/04/25		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2024/04/25		91	%	75 - 125
			Acid Extractable Bismuth (Bi)	2024/04/25		99	%	75 - 125
			Acid Extractable Boron (B)	2024/04/25		82	%	75 - 125
			Acid Extractable Cadmium (Cd)	2024/04/25		97	%	75 - 125
			Acid Extractable Chromium (Cr)	2024/04/25		94	%	75 - 125
			Acid Extractable Cobalt (Co)	2024/04/25		92	%	75 - 125
			Acid Extractable Copper (Cu)	2024/04/25		92	%	75 - 125
			Acid Extractable Lead (Pb)	2024/04/25		NC	%	75 - 125
			Acid Extractable Lithium (Li)	2024/04/25		95	%	75 - 125
			Acid Extractable Manganese (Mn)	2024/04/25		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2024/04/25		99	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2024/04/25		99	%	75 - 125
			Acid Extractable Nickel (Ni)	2024/04/25		88	%	75 - 125
			Acid Extractable Rubidium (Rb)	2024/04/25		92	%	75 - 125
			Acid Extractable Selenium (Se)	2024/04/25		98	%	75 - 125
			Acid Extractable Silver (Ag)	2024/04/25		95	%	75 - 125
			Acid Extractable Strontium (Sr)	2024/04/25		NC	%	75 - 125
			Acid Extractable Thallium (Tl)	2024/04/25		96	%	75 - 125
			Acid Extractable Tin (Sn)	2024/04/25		99	%	75 - 125
			Acid Extractable Uranium (U)	2024/04/25		98	%	75 - 125
			Acid Extractable Vanadium (V)	2024/04/25		94	%	75 - 125
			Acid Extractable Zinc (Zn)	2024/04/25		NC	%	75 - 125
9354839	MTZ	Spiked Blank	Acid Extractable Antimony (Sb)	2024/04/25		101	%	75 - 125
			Acid Extractable Arsenic (As)	2024/04/25		98	%	75 - 125
			Acid Extractable Barium (Ba)	2024/04/25		94	%	75 - 125
			Acid Extractable Beryllium (Be)	2024/04/25		92	%	75 - 125
			Acid Extractable Bismuth (Bi)	2024/04/25		99	%	75 - 125
			Acid Extractable Boron (B)	2024/04/25		91	%	75 - 125
			Acid Extractable Cadmium (Cd)	2024/04/25		99	%	75 - 125
			Acid Extractable Chromium (Cr)	2024/04/25		97	%	75 - 125
			Acid Extractable Cobalt (Co)	2024/04/25		96	%	75 - 125
			Acid Extractable Copper (Cu)	2024/04/25		96	%	75 - 125
			Acid Extractable Lead (Pb)	2024/04/25		96	%	75 - 125
			Acid Extractable Lithium (Li)	2024/04/25		96	%	75 - 125
			Acid Extractable Manganese (Mn)	2024/04/25		96	%	75 - 125
			Acid Extractable Mercury (Hg)	2024/04/25		101	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2024/04/25		103	%	75 - 125
			Acid Extractable Nickel (Ni)	2024/04/25		96	%	75 - 125
			Acid Extractable Rubidium (Rb)	2024/04/25		97	%	75 - 125
			Acid Extractable Selenium (Se)	2024/04/25		99	%	75 - 125
			Acid Extractable Silver (Ag)	2024/04/25		99	%	75 - 125
			Acid Extractable Strontium (Sr)	2024/04/25		99	%	75 - 125
			Acid Extractable Thallium (Tl)	2024/04/25		98	%	75 - 125

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Tin (Sn)	2024/04/25		100	%	75 - 125
			Acid Extractable Uranium (U)	2024/04/25		97	%	75 - 125
			Acid Extractable Vanadium (V)	2024/04/25		95	%	75 - 125
			Acid Extractable Zinc (Zn)	2024/04/25		99	%	75 - 125
9354839	MTZ	Method Blank	Acid Extractable Aluminum (Al)	2024/04/25	<10		mg/kg	
			Acid Extractable Antimony (Sb)	2024/04/25	<2.0		mg/kg	
			Acid Extractable Arsenic (As)	2024/04/25	<2.0		mg/kg	
			Acid Extractable Barium (Ba)	2024/04/25	<5.0		mg/kg	
			Acid Extractable Beryllium (Be)	2024/04/25	<1.0		mg/kg	
			Acid Extractable Bismuth (Bi)	2024/04/25	<2.0		mg/kg	
			Acid Extractable Boron (B)	2024/04/25	<50		mg/kg	
			Acid Extractable Cadmium (Cd)	2024/04/25	<0.30		mg/kg	
			Acid Extractable Chromium (Cr)	2024/04/25	<2.0		mg/kg	
			Acid Extractable Cobalt (Co)	2024/04/25	<1.0		mg/kg	
			Acid Extractable Copper (Cu)	2024/04/25	<2.0		mg/kg	
			Acid Extractable Iron (Fe)	2024/04/25	<50		mg/kg	
			Acid Extractable Lead (Pb)	2024/04/25	<0.50		mg/kg	
			Acid Extractable Lithium (Li)	2024/04/25	<2.0		mg/kg	
			Acid Extractable Manganese (Mn)	2024/04/25	<2.0		mg/kg	
			Acid Extractable Mercury (Hg)	2024/04/25	<0.10		mg/kg	
			Acid Extractable Molybdenum (Mo)	2024/04/25	<2.0		mg/kg	
			Acid Extractable Nickel (Ni)	2024/04/25	<2.0		mg/kg	
			Acid Extractable Rubidium (Rb)	2024/04/25	<2.0		mg/kg	
			Acid Extractable Selenium (Se)	2024/04/25	<0.50		mg/kg	
			Acid Extractable Silver (Ag)	2024/04/25	<0.50		mg/kg	
			Acid Extractable Strontium (Sr)	2024/04/25	<5.0		mg/kg	
			Acid Extractable Thallium (Tl)	2024/04/25	<0.10		mg/kg	
			Acid Extractable Tin (Sn)	2024/04/25	<1.0		mg/kg	
			Acid Extractable Uranium (U)	2024/04/25	<0.10		mg/kg	
			Acid Extractable Vanadium (V)	2024/04/25	<2.0		mg/kg	
			Acid Extractable Zinc (Zn)	2024/04/25	<5.0		mg/kg	
9354839	MTZ	RPD [YYX233-02]	Acid Extractable Aluminum (Al)	2024/04/26	6.9		%	35
			Acid Extractable Antimony (Sb)	2024/04/26	NC		%	35
			Acid Extractable Arsenic (As)	2024/04/26	1.0		%	35
			Acid Extractable Barium (Ba)	2024/04/26	16		%	35
			Acid Extractable Beryllium (Be)	2024/04/26	0.82		%	35
			Acid Extractable Bismuth (Bi)	2024/04/26	NC		%	35
			Acid Extractable Boron (B)	2024/04/26	NC		%	35
			Acid Extractable Cadmium (Cd)	2024/04/26	1.9		%	35
			Acid Extractable Chromium (Cr)	2024/04/26	6.3		%	35
			Acid Extractable Cobalt (Co)	2024/04/26	0.73		%	35
			Acid Extractable Copper (Cu)	2024/04/26	1.6		%	35
			Acid Extractable Iron (Fe)	2024/04/26	2.3		%	35
			Acid Extractable Lead (Pb)	2024/04/26	1.8		%	35
			Acid Extractable Lithium (Li)	2024/04/26	4.7		%	35
			Acid Extractable Manganese (Mn)	2024/04/26	0.062		%	35
			Acid Extractable Mercury (Hg)	2024/04/26	NC		%	35
			Acid Extractable Molybdenum (Mo)	2024/04/26	NC		%	35
			Acid Extractable Nickel (Ni)	2024/04/26	2.4		%	35
			Acid Extractable Rubidium (Rb)	2024/04/26	9.2		%	35
			Acid Extractable Selenium (Se)	2024/04/26	NC		%	35
			Acid Extractable Silver (Ag)	2024/04/26	4.9		%	35
			Acid Extractable Strontium (Sr)	2024/04/26	1.4		%	35

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Thallium (Tl)	2024/04/26	5.2		%	35
			Acid Extractable Tin (Sn)	2024/04/26	NC		%	35
			Acid Extractable Uranium (U)	2024/04/26	4.8		%	35
			Acid Extractable Vanadium (V)	2024/04/26	5.4		%	35
			Acid Extractable Zinc (Zn)	2024/04/26	1.0		%	35
9361118	BBD	QC Standard	Organic Carbon (TOC)	2024/04/29		90	%	75 - 125
9361118	BBD	Method Blank	Organic Carbon (TOC)	2024/04/29	<0.50		g/kg	
9361118	BBD	RPD [YYX228-02]	Organic Carbon (TOC)	2024/04/29	4.5		%	35

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

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Bureau Veritas Job #: C4C0104
Report Date: 2024/04/30

Dillon Consulting Limited
Client Project #: 22-3723
Site Location: LAKE ENON
Sampler Initials: JM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Janah Rhyno, Scientific Specialist

Phil Deveau, Scientific Specialist (Organics)

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Kathy Martin, Laboratory Manager responsible for Nova Scotia Environmental laboratory operations.

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Your Project #: 22-3723
Site Location: LAKE ENON
Your C.O.C. #: 968420-01-01

Attention: Nadine Wambolt

Dillon Consulting Limited
275 Charlotte St
Sydney, NS
CANADA B1P 1C6

Report Date: 2024/05/13
Report #: R8146913
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4C0132
Received: 2024/04/23, 13:41

Sample Matrix: Sediment
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Particle size in solids (pipette&sieve) (1, 2)	4	N/A	2024/05/08	ATL SOP 00012	MSAMS'78/WREP-125R3m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Bedford, 200 Bluewater Rd Suite 105, Bedford, NS, B4B 1G9
(2) Note: Graphical representation of larger fractions (PHI-4, PHI -3 and PHI -2) not applicable unless these optional parameters are specifically requested.

Bureau Veritas 465 George St., Unit G, Sydney, NS, B1P 1K5 Tel:902 567 1255 Toll Free: 888 535 7770 Fax: 902 539 6504 www.bvna.com

Your Project #: 22-3723
Site Location: LAKE ENON
Your C.O.C. #: 968420-01-01

Attention: Nadine Wambolt

Dillon Consulting Limited
275 Charlotte St
Sydney, NS
CANADA B1P 1C6

Report Date: 2024/05/13
Report #: R8146913
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4C0132
Received: 2024/04/23, 13:41

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AUTHORIZED REPORT
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Bureau Veritas
13 May 2024 14:58:01

Please direct all questions regarding this Certificate of Analysis to:
Natalie MacAskill, Key Account Specialist
Email: Natalie.MacAskill@bureauveritas.com
Phone# (902)567-1255 Ext:17

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Bureau Veritas Job #: C4C0132
Report Date: 2024/05/13

Dillon Consulting Limited
Client Project #: 22-3723
Site Location: LAKE ENON
Sampler Initials: ML

RESULTS OF ANALYSES OF SEDIMENT

Bureau Veritas ID		YYX345	YYX346	YYX347	YYX348		
Sampling Date		2024/04/18 12:20	2024/04/18 13:50	2024/04/18 15:00	2024/04/18 15:25		
COC Number		968420-01-01	968420-01-01	968420-01-01	968420-01-01		
Sample #		WC2	SED27	SED28	SED29		
	UNITS	SED26	SED27	SED28	SED29	RDL	QC Batch
Inorganics							
< -1 Phi (2 mm)	%	50	87	88	99 (1)	0.10	9366887
< 0 Phi (1 mm)	%	38 (1)	81 (1)	82 (1)	97 (1)	0.10	9366887
< +1 Phi (0.5 mm)	%	26 (1)	75 (1)	76 (1)	95 (1)	0.10	9366887
< +2 Phi (0.25 mm)	%	17	69	71	92 (1)	0.10	9366887
< +3 Phi (0.12 mm)	%	14	64	66	84	0.10	9366887
< +4 Phi (0.062 mm)	%	12	57	59	74	0.10	9366887
< +5 Phi (0.031 mm)	%	10	44	47	63	0.10	9366887
< +6 Phi (0.016 mm)	%	8.7	32	35	55	0.10	9366887
< +7 Phi (0.0078 mm)	%	6.4	20	21	47	0.10	9366887
< +8 Phi (0.0039 mm)	%	5.8	18	18	43	0.10	9366887
< +9 Phi (0.0020 mm)	%	4.7	13	13	38	0.10	9366887
Gravel	%	50	13	12	1.5	0.10	9366887
Sand	%	38	30	29	25	0.10	9366887
Silt	%	6.0	40	41	31	0.10	9366887
Clay	%	5.8	18	18	43	0.10	9366887

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) PSA sample observation comment: Fraction contained organic matter.

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GENERAL COMMENTS

Results relate only to the items tested.

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Bureau Veritas Job #: C4C0132
Report Date: 2024/05/13

Dillon Consulting Limited
Client Project #: 22-3723
Site Location: LAKE ENON
Sampler Initials: ML

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9366887	TPE	RPD	Gravel	2024/05/08	4.7		%	35
			Sand	2024/05/08	6.0		%	35
			Silt	2024/05/08	14		%	35
			Clay	2024/05/08	22		%	35

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

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Bureau Veritas Job #: C4C0132
Report Date: 2024/05/13

Dillon Consulting Limited
Client Project #: 22-3723
Site Location: LAKE ENON
Sampler Initials: ML

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Bryon Angevine, Senior Analyst

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Your Project #: 223723
Site Location: LAKE ENON

Attention: Nadine Wambolt

Dillon Consulting Limited
275 Charlotte St
Sydney, NS
CANADA B1P 1C6

Report Date: 2024/06/06
Report #: R8179819
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4F9342
Received: 2024/05/28, 15:55

Sample Matrix: Soil
Samples Received: 12

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Metals Solids Acid Extr. ICPMS (1)	10	2024/06/04	2024/06/05	ATL SOP 00058	EPA 6020B R2 m
Metals Solids Acid Extr. ICPMS (1)	2	2024/06/04	2024/06/06	ATL SOP 00058	EPA 6020B R2 m
Total Organic Carbon in Soil (1)	12	2024/06/04	2024/06/04	ATL SOP 00044	LECO203601224 1991 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Bedford, 200 Bluewater Rd Suite 105, Bedford, NS, B4B 1G9

Your Project #: 223723
Site Location: LAKE ENON

Attention: Nadine Wambolt

Dillon Consulting Limited
275 Charlotte St
Sydney, NS
CANADA B1P 1C6

Report Date: 2024/06/06
Report #: R8179819
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4F9342
Received: 2024/05/28, 15:55

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AUTHORIZED REPORT
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Bureau Veritas
06 Jun 2024 15:59:33

Please direct all questions regarding this Certificate of Analysis to:
Natalie MacAskill, Key Account Specialist
Email: Natalie.MacAskill@bureauveritas.com
Phone# (902)567-1255 Ext:17

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Bureau Veritas Job #: C4F9342
Report Date: 2024/06/06

Dillon Consulting Limited
Client Project #: 223723
Site Location: LAKE ENON
Sampler Initials: JM

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		ZHA716	ZHA742	ZHA743	ZHA744	ZHA745	ZHA746	ZHA747		
Sampling Date		2024/05/28	2024/05/28	2024/05/28	2024/05/28	2024/05/28	2024/05/28	2024/05/28		
	UNITS	SED 27	SED 28	SED 29	SED 36	SED 37	SED 38	SED 39	RDL	QC Batch
Inorganics										
Organic Carbon (TOC)	g/kg	38	42	64	66	19	17	18	0.50	9431597

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		ZHA748	ZHA749	ZHA750	ZHA751	ZHA752		
Sampling Date		2024/05/28	2024/05/28	2024/05/28	2024/05/28	2024/05/28		
	UNITS	SED 40	SED 41	SED 42	SED 43	SED 44	RDL	QC Batch
Inorganics								
Organic Carbon (TOC)	g/kg	31	28	24	33	55	0.50	9431597

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C4F9342
Report Date: 2024/06/06

Dillon Consulting Limited
Client Project #: 223723
Site Location: LAKE ENON
Sampler Initials: JM

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		ZHA716	ZHA742	ZHA743	ZHA744	ZHA745	ZHA746		
Sampling Date		2024/05/28	2024/05/28	2024/05/28	2024/05/28	2024/05/28	2024/05/28		
	UNITS	SED 27	SED 28	SED 29	SED 36	SED 37	SED 38	RDL	QC Batch
Metals									
Acid Extractable Aluminum (Al)	mg/kg	22000	25000	30000	22000	16000	12000	10	9432303
Acid Extractable Antimony (Sb)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	9432303
Acid Extractable Arsenic (As)	mg/kg	8.7	8.7	8.5	7.2	5.8	3.8	2.0	9432303
Acid Extractable Barium (Ba)	mg/kg	700	950	540	370	780	270	5.0	9432303
Acid Extractable Beryllium (Be)	mg/kg	1.1	1.2	1.5	1.1	<1.0	<1.0	1.0	9432303
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	9432303
Acid Extractable Boron (B)	mg/kg	<50	<50	<50	<50	<50	<50	50	9432303
Acid Extractable Cadmium (Cd)	mg/kg	5.7	8.4	5.2	6.7	6.7	3.2	0.30	9432303
Acid Extractable Chromium (Cr)	mg/kg	20	21	25	19	16	12	2.0	9432303
Acid Extractable Cobalt (Co)	mg/kg	12	12	12	12	11	8.5	1.0	9432303
Acid Extractable Copper (Cu)	mg/kg	20	24	28	18	15	9.4	2.0	9432303
Acid Extractable Iron (Fe)	mg/kg	29000	30000	29000	32000	21000	17000	50	9432303
Acid Extractable Lead (Pb)	mg/kg	220	210	220	180	210	130	0.50	9432303
Acid Extractable Lithium (Li)	mg/kg	29	29	40	28	23	17	2.0	9432303
Acid Extractable Manganese (Mn)	mg/kg	6900	23000	1500	1300	6400	620	2.0	9432303
Acid Extractable Mercury (Hg)	mg/kg	0.15	0.17	0.17	0.11	<0.10	<0.10	0.10	9432303
Acid Extractable Molybdenum (Mo)	mg/kg	3.1	9.5	4.4	3.0	3.8	<2.0	2.0	9432303
Acid Extractable Nickel (Ni)	mg/kg	21	24	25	20	20	12	2.0	9432303
Acid Extractable Rubidium (Rb)	mg/kg	17	18	21	15	14	8.2	2.0	9432303
Acid Extractable Selenium (Se)	mg/kg	1.4	1.6	2.2	1.6	0.82	0.59	0.50	9432303
Acid Extractable Silver (Ag)	mg/kg	0.85	0.97	1.3	0.96	0.69	0.64	0.50	9432303
Acid Extractable Strontium (Sr)	mg/kg	400	720	600	460	320	170	5.0	9432303
Acid Extractable Thallium (Tl)	mg/kg	0.38	0.42	0.40	0.33	0.26	0.18	0.10	9432303
Acid Extractable Tin (Sn)	mg/kg	1.5	1.6	1.9	1.1	1.0	<1.0	1.0	9432303
Acid Extractable Uranium (U)	mg/kg	4.0	4.9	5.0	3.4	3.0	1.8	0.10	9432303
Acid Extractable Vanadium (V)	mg/kg	38	42	43	35	30	24	2.0	9432303
Acid Extractable Zinc (Zn)	mg/kg	580	640	660	580	470	370	5.0	9432303

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C4F9342
Report Date: 2024/06/06

Dillon Consulting Limited
Client Project #: 223723
Site Location: LAKE ENON
Sampler Initials: JM

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		ZHA747		ZHA748		ZHA749		ZHA750	ZHA751		
Sampling Date		2024/05/28		2024/05/28		2024/05/28		2024/05/28	2024/05/28		
	UNITS	SED 39	RDL	SED 40	RDL	SED 41	RDL	SED 42	SED 43	RDL	QC Batch
Metals											
Acid Extractable Aluminum (Al)	mg/kg	18000	10	16000	10	18000	10	23000	20000	10	9432303
Acid Extractable Antimony (Sb)	mg/kg	<2.0	2.0	<2.0	2.0	<2.0	2.0	<2.0	<2.0	2.0	9432303
Acid Extractable Arsenic (As)	mg/kg	8.3	2.0	7.1	2.0	7.0	2.0	8.9	6.5	2.0	9432303
Acid Extractable Barium (Ba)	mg/kg	2100	50	900	5.0	1800	50	910	730	5.0	9432303
Acid Extractable Beryllium (Be)	mg/kg	<1.0	1.0	<1.0	1.0	<1.0	1.0	1.1	1.1	1.0	9432303
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	2.0	<2.0	2.0	<2.0	2.0	<2.0	<2.0	2.0	9432303
Acid Extractable Boron (B)	mg/kg	<50	50	<50	50	<50	50	<50	<50	50	9432303
Acid Extractable Cadmium (Cd)	mg/kg	2.8	0.30	7.2	0.30	5.7	0.30	7.0	4.3	0.30	9432303
Acid Extractable Chromium (Cr)	mg/kg	22	2.0	20	2.0	18	2.0	27	18	2.0	9432303
Acid Extractable Cobalt (Co)	mg/kg	18	1.0	12	1.0	11	1.0	15	8.6	1.0	9432303
Acid Extractable Copper (Cu)	mg/kg	34	2.0	33	2.0	24	2.0	42	18	2.0	9432303
Acid Extractable Iron (Fe)	mg/kg	31000	50	26000	50	31000	50	32000	28000	50	9432303
Acid Extractable Lead (Pb)	mg/kg	770	0.50	790	0.50	490	0.50	540	270	0.50	9432303
Acid Extractable Lithium (Li)	mg/kg	29	2.0	26	2.0	28	2.0	38	28	2.0	9432303
Acid Extractable Manganese (Mn)	mg/kg	4400	2.0	1300	2.0	14000	2.0	2000	7900	2.0	9432303
Acid Extractable Mercury (Hg)	mg/kg	<0.10	0.10	0.12	0.10	0.12	0.10	0.11	0.11	0.10	9432303
Acid Extractable Molybdenum (Mo)	mg/kg	4.0	2.0	2.4	2.0	4.1	2.0	2.5	3.0	2.0	9432303
Acid Extractable Nickel (Ni)	mg/kg	22	2.0	22	2.0	20	2.0	32	16	2.0	9432303
Acid Extractable Rubidium (Rb)	mg/kg	16	2.0	13	2.0	14	2.0	20	15	2.0	9432303
Acid Extractable Selenium (Se)	mg/kg	1.6	0.50	1.2	0.50	1.3	0.50	1.3	1.1	0.50	9432303
Acid Extractable Silver (Ag)	mg/kg	1.4	0.50	1.3	0.50	1.1	0.50	1.6	0.76	0.50	9432303
Acid Extractable Strontium (Sr)	mg/kg	370	5.0	370	5.0	440	5.0	440	350	5.0	9432303
Acid Extractable Thallium (Tl)	mg/kg	0.39	0.10	0.33	0.10	0.29	0.10	0.46	0.28	0.10	9432303
Acid Extractable Tin (Sn)	mg/kg	<1.0	1.0	<1.0	1.0	<1.0	1.0	1.3	<1.0	1.0	9432303
Acid Extractable Uranium (U)	mg/kg	4.4	0.10	3.4	0.10	3.9	0.10	4.0	3.9	0.10	9432303
Acid Extractable Vanadium (V)	mg/kg	35	2.0	33	2.0	33	2.0	41	38	2.0	9432303
Acid Extractable Zinc (Zn)	mg/kg	590	5.0	1000	5.0	760	5.0	1300	540	5.0	9432303

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C4F9342
Report Date: 2024/06/06

Dillon Consulting Limited
Client Project #: 223723
Site Location: LAKE ENON
Sampler Initials: JM

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		ZHA752		
Sampling Date		2024/05/28		
	UNITS	SED 44	RDL	QC Batch
Metals				
Acid Extractable Aluminum (Al)	mg/kg	27000	10	9432303
Acid Extractable Antimony (Sb)	mg/kg	<2.0	2.0	9432303
Acid Extractable Arsenic (As)	mg/kg	8.5	2.0	9432303
Acid Extractable Barium (Ba)	mg/kg	540	5.0	9432303
Acid Extractable Beryllium (Be)	mg/kg	1.3	1.0	9432303
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	2.0	9432303
Acid Extractable Boron (B)	mg/kg	<50	50	9432303
Acid Extractable Cadmium (Cd)	mg/kg	6.2	0.30	9432303
Acid Extractable Chromium (Cr)	mg/kg	26	2.0	9432303
Acid Extractable Cobalt (Co)	mg/kg	12	1.0	9432303
Acid Extractable Copper (Cu)	mg/kg	27	2.0	9432303
Acid Extractable Iron (Fe)	mg/kg	28000	50	9432303
Acid Extractable Lead (Pb)	mg/kg	290	0.50	9432303
Acid Extractable Lithium (Li)	mg/kg	39	2.0	9432303
Acid Extractable Manganese (Mn)	mg/kg	1200	2.0	9432303
Acid Extractable Mercury (Hg)	mg/kg	0.18	0.10	9432303
Acid Extractable Molybdenum (Mo)	mg/kg	3.2	2.0	9432303
Acid Extractable Nickel (Ni)	mg/kg	26	2.0	9432303
Acid Extractable Rubidium (Rb)	mg/kg	20	2.0	9432303
Acid Extractable Selenium (Se)	mg/kg	2.0	0.50	9432303
Acid Extractable Silver (Ag)	mg/kg	1.2	0.50	9432303
Acid Extractable Strontium (Sr)	mg/kg	510	5.0	9432303
Acid Extractable Thallium (Tl)	mg/kg	0.42	0.10	9432303
Acid Extractable Tin (Sn)	mg/kg	1.8	1.0	9432303
Acid Extractable Uranium (U)	mg/kg	4.5	0.10	9432303
Acid Extractable Vanadium (V)	mg/kg	43	2.0	9432303
Acid Extractable Zinc (Zn)	mg/kg	730	5.0	9432303

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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GENERAL COMMENTS

Results relate only to the items tested.

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Bureau Veritas Job #: C4F9342
Report Date: 2024/06/06

Dillon Consulting Limited
Client Project #: 223723
Site Location: LAKE ENON
Sampler Initials: JM

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9431597	BBD	QC Standard	Organic Carbon (TOC)	2024/06/04		86	%	75 - 125
9431597	BBD	Method Blank	Organic Carbon (TOC)	2024/06/04	<0.50		g/kg	
9431597	BBD	RPD	Organic Carbon (TOC)	2024/06/04	1.0		%	35
9432303	MTZ	Matrix Spike	Acid Extractable Antimony (Sb)	2024/06/06		85	%	75 - 125
			Acid Extractable Arsenic (As)	2024/06/06		93	%	75 - 125
			Acid Extractable Barium (Ba)	2024/06/06		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2024/06/06		96	%	75 - 125
			Acid Extractable Bismuth (Bi)	2024/06/06		103	%	75 - 125
			Acid Extractable Boron (B)	2024/06/06		92	%	75 - 125
			Acid Extractable Cadmium (Cd)	2024/06/06		103	%	75 - 125
			Acid Extractable Chromium (Cr)	2024/06/06		NC	%	75 - 125
			Acid Extractable Cobalt (Co)	2024/06/06		90	%	75 - 125
			Acid Extractable Copper (Cu)	2024/06/06		NC	%	75 - 125
			Acid Extractable Lead (Pb)	2024/06/06		82	%	75 - 125
			Acid Extractable Lithium (Li)	2024/06/06		NC	%	75 - 125
			Acid Extractable Manganese (Mn)	2024/06/06		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2024/06/06		102	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2024/06/06		NC	%	75 - 125
			Acid Extractable Nickel (Ni)	2024/06/06		NC	%	75 - 125
			Acid Extractable Rubidium (Rb)	2024/06/06		96	%	75 - 125
			Acid Extractable Selenium (Se)	2024/06/06		102	%	75 - 125
			Acid Extractable Silver (Ag)	2024/06/06		104	%	75 - 125
			Acid Extractable Strontium (Sr)	2024/06/06		93	%	75 - 125
			Acid Extractable Thallium (Tl)	2024/06/06		99	%	75 - 125
			Acid Extractable Tin (Sn)	2024/06/06		NC	%	75 - 125
			Acid Extractable Uranium (U)	2024/06/06		102	%	75 - 125
			Acid Extractable Vanadium (V)	2024/06/06		NC	%	75 - 125
			Acid Extractable Zinc (Zn)	2024/06/06		NC	%	75 - 125
9432303	MTZ	Spiked Blank	Acid Extractable Antimony (Sb)	2024/06/05		109	%	75 - 125
			Acid Extractable Arsenic (As)	2024/06/05		98	%	75 - 125
			Acid Extractable Barium (Ba)	2024/06/05		97	%	75 - 125
			Acid Extractable Beryllium (Be)	2024/06/05		94	%	75 - 125
			Acid Extractable Bismuth (Bi)	2024/06/05		102	%	75 - 125
			Acid Extractable Boron (B)	2024/06/05		98	%	75 - 125
			Acid Extractable Cadmium (Cd)	2024/06/05		102	%	75 - 125
			Acid Extractable Chromium (Cr)	2024/06/05		98	%	75 - 125
			Acid Extractable Cobalt (Co)	2024/06/05		98	%	75 - 125
			Acid Extractable Copper (Cu)	2024/06/05		98	%	75 - 125
			Acid Extractable Lead (Pb)	2024/06/05		98	%	75 - 125
			Acid Extractable Lithium (Li)	2024/06/05		101	%	75 - 125
			Acid Extractable Manganese (Mn)	2024/06/05		98	%	75 - 125
			Acid Extractable Mercury (Hg)	2024/06/05		101	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2024/06/05		108	%	75 - 125
			Acid Extractable Nickel (Ni)	2024/06/05		102	%	75 - 125
			Acid Extractable Rubidium (Rb)	2024/06/05		96	%	75 - 125
			Acid Extractable Selenium (Se)	2024/06/05		102	%	75 - 125
			Acid Extractable Silver (Ag)	2024/06/05		104	%	75 - 125
			Acid Extractable Strontium (Sr)	2024/06/05		99	%	75 - 125
			Acid Extractable Thallium (Tl)	2024/06/05		101	%	75 - 125
			Acid Extractable Tin (Sn)	2024/06/05		105	%	75 - 125
			Acid Extractable Uranium (U)	2024/06/05		100	%	75 - 125
			Acid Extractable Vanadium (V)	2024/06/05		100	%	75 - 125
			Acid Extractable Zinc (Zn)	2024/06/05		100	%	75 - 125

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9432303	MTZ	Method Blank	Acid Extractable Aluminum (Al)	2024/06/05	<10		mg/kg	
			Acid Extractable Antimony (Sb)	2024/06/05	<2.0		mg/kg	
			Acid Extractable Arsenic (As)	2024/06/05	<2.0		mg/kg	
			Acid Extractable Barium (Ba)	2024/06/05	<5.0		mg/kg	
			Acid Extractable Beryllium (Be)	2024/06/05	<1.0		mg/kg	
			Acid Extractable Bismuth (Bi)	2024/06/05	<2.0		mg/kg	
			Acid Extractable Boron (B)	2024/06/05	<50		mg/kg	
			Acid Extractable Cadmium (Cd)	2024/06/05	<0.30		mg/kg	
			Acid Extractable Chromium (Cr)	2024/06/05	<2.0		mg/kg	
			Acid Extractable Cobalt (Co)	2024/06/05	<1.0		mg/kg	
			Acid Extractable Copper (Cu)	2024/06/05	<2.0		mg/kg	
			Acid Extractable Iron (Fe)	2024/06/05	<50		mg/kg	
			Acid Extractable Lead (Pb)	2024/06/05	<0.50		mg/kg	
			Acid Extractable Lithium (Li)	2024/06/05	<2.0		mg/kg	
			Acid Extractable Manganese (Mn)	2024/06/05	<2.0		mg/kg	
			Acid Extractable Mercury (Hg)	2024/06/05	<0.10		mg/kg	
			Acid Extractable Molybdenum (Mo)	2024/06/05	<2.0		mg/kg	
			Acid Extractable Nickel (Ni)	2024/06/05	<2.0		mg/kg	
			Acid Extractable Rubidium (Rb)	2024/06/05	<2.0		mg/kg	
			Acid Extractable Selenium (Se)	2024/06/05	<0.50		mg/kg	
			Acid Extractable Silver (Ag)	2024/06/05	<0.50		mg/kg	
			Acid Extractable Strontium (Sr)	2024/06/05	<5.0		mg/kg	
			Acid Extractable Thallium (Tl)	2024/06/05	<0.10		mg/kg	
			Acid Extractable Tin (Sn)	2024/06/05	<1.0		mg/kg	
			Acid Extractable Uranium (U)	2024/06/05	<0.10		mg/kg	
			Acid Extractable Vanadium (V)	2024/06/05	<2.0		mg/kg	
			Acid Extractable Zinc (Zn)	2024/06/05	<5.0		mg/kg	
9432303	MTZ	RPD	Acid Extractable Aluminum (Al)	2024/06/06	12		%	35
			Acid Extractable Antimony (Sb)	2024/06/06	32		%	35
			Acid Extractable Arsenic (As)	2024/06/06	35		%	35
			Acid Extractable Barium (Ba)	2024/06/06	29		%	35
			Acid Extractable Beryllium (Be)	2024/06/06	5.0		%	35
			Acid Extractable Bismuth (Bi)	2024/06/06	NC		%	35
			Acid Extractable Boron (B)	2024/06/06	NC		%	35
			Acid Extractable Cadmium (Cd)	2024/06/06	26		%	35
			Acid Extractable Chromium (Cr)	2024/06/06	51 (1)		%	35
			Acid Extractable Cobalt (Co)	2024/06/06	28		%	35
			Acid Extractable Copper (Cu)	2024/06/06	38 (1)		%	35
			Acid Extractable Iron (Fe)	2024/06/06	5.4		%	35
			Acid Extractable Lead (Pb)	2024/06/06	52 (1)		%	35
			Acid Extractable Lithium (Li)	2024/06/06	23		%	35
			Acid Extractable Manganese (Mn)	2024/06/06	27		%	35
			Acid Extractable Mercury (Hg)	2024/06/06	NC		%	35
			Acid Extractable Molybdenum (Mo)	2024/06/06	12		%	35
			Acid Extractable Nickel (Ni)	2024/06/06	35 (1)		%	35
			Acid Extractable Rubidium (Rb)	2024/06/06	8.9		%	35
			Acid Extractable Selenium (Se)	2024/06/06	4.9		%	35
			Acid Extractable Silver (Ag)	2024/06/06	NC		%	35
			Acid Extractable Strontium (Sr)	2024/06/06	26		%	35
			Acid Extractable Thallium (Tl)	2024/06/06	31		%	35
			Acid Extractable Tin (Sn)	2024/06/06	48 (1)		%	35
			Acid Extractable Uranium (U)	2024/06/06	15		%	35
			Acid Extractable Vanadium (V)	2024/06/06	17		%	35

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Bureau Veritas Job #: C4F9342
Report Date: 2024/06/06

Dillon Consulting Limited
Client Project #: 223723
Site Location: LAKE ENON
Sampler Initials: JM

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Zinc (Zn)	2024/06/06	26		%	35

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Poor RPD due to sample inhomogeneity. Verified by repeat digestion and analysis.

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Bureau Veritas Job #: C4F9342
Report Date: 2024/06/06

Dillon Consulting Limited
Client Project #: 223723
Site Location: LAKE ENON
Sampler Initials: JM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Colleen Acker, B.Sc, Scientific Service Specialist

Bureau Veritas Proprietary Software
Logiciel Propriétaire de Bureau Veritas

Automated Statchk

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Kathy Martin, Laboratory Manager responsible for Nova Scotia Environmental laboratory operations.

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Your Project #: 223723
Site Location: LAKE ENON

Attention: Nadine Wambolt

Dillon Consulting Limited
275 Charlotte St
Sydney, NS
CANADA B1P 1C6

Report Date: 2024/06/11
Report #: R8186666
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4G5582
Received: 2024/06/03, 14:00

Sample Matrix: Soil
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Metals Solids Acid Extr. ICPMS (1)	5	2024/06/10	2024/06/10	ATL SOP 00058	EPA 6020B R2 m
Metals Solids Acid Extr. ICPMS (1)	1	2024/06/10	2024/06/11	ATL SOP 00058	EPA 6020B R2 m
Total Organic Carbon in Soil (1)	6	2024/06/10	2024/06/10	ATL SOP 00044	LECO203601224 1991 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Bedford, 200 Bluewater Rd Suite 105, Bedford, NS, B4B 1G9

Your Project #: 223723
Site Location: LAKE ENON

Attention: Nadine Wambolt

Dillon Consulting Limited
275 Charlotte St
Sydney, NS
CANADA B1P 1C6

Report Date: 2024/06/11
Report #: R8186666
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4G5582
Received: 2024/06/03, 14:00

Encryption Key

Bureau Veritas
11 Jun 2024 16:27:10

Please direct all questions regarding this Certificate of Analysis to:
Natalie MacAskill, Key Account Specialist
Email: Natalie.MacAskill@bureauveritas.com
Phone# (902)567-1255 Ext:17

==========

This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Kathy Martin, Laboratory Manager responsible for Nova Scotia Environmental laboratory operations.

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Bureau Veritas Job #: C4G5582
Report Date: 2024/06/11

Dillon Consulting Limited
Client Project #: 223723
Site Location: LAKE ENON

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		ZIJ523	ZIJ524	ZIJ525	ZIJ526	ZIJ527	ZIJ528		
Sampling Date		2024/05/30	2024/05/30	2024/05/30	2024/05/30	2024/05/30	2024/05/30		
	UNITS	SED30	SED31	SED32	SED35	SED46	SED47	RDL	QC Batch
Inorganics									
Organic Carbon (TOC)	g/kg	8.5	97	34	10	19	10	0.50	9443997

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		ZIJ523	ZIJ524		ZIJ525		ZIJ526	ZIJ527	ZIJ528		
Sampling Date		2024/05/30	2024/05/30		2024/05/30		2024/05/30	2024/05/30	2024/05/30		
	UNITS	SED30	SED31	RDL	SED32	RDL	SED35	SED46	SED47	RDL	QC Batch
Metals											
Acid Extractable Aluminum (Al)	mg/kg	10000	28000	10	18000	10	8200	16000	13000	10	9444119
Acid Extractable Antimony (Sb)	mg/kg	<2.0	<2.0	2.0	<2.0	2.0	<2.0	<2.0	<2.0	2.0	9444119
Acid Extractable Arsenic (As)	mg/kg	3.5	8.0	2.0	7.4	2.0	2.7	7.2	3.8	2.0	9444119
Acid Extractable Barium (Ba)	mg/kg	250	400	5.0	720	5.0	250	1300	290	5.0	9444119
Acid Extractable Beryllium (Be)	mg/kg	<1.0	1.4	1.0	<1.0	1.0	<1.0	<1.0	<1.0	1.0	9444119
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	<2.0	2.0	<2.0	2.0	<2.0	<2.0	<2.0	2.0	9444119
Acid Extractable Boron (B)	mg/kg	<50	<50	50	<50	50	<50	<50	<50	50	9444119
Acid Extractable Cadmium (Cd)	mg/kg	1.8	7.9	0.30	6.3	0.30	1.3	6.7	4.3	0.30	9444119
Acid Extractable Chromium (Cr)	mg/kg	11	21	2.0	20	2.0	9.7	18	11	2.0	9444119
Acid Extractable Cobalt (Co)	mg/kg	6.6	9.6	1.0	11	1.0	5.3	11	8.0	1.0	9444119
Acid Extractable Copper (Cu)	mg/kg	6.5	26	2.0	30	2.0	5.9	25	7.0	2.0	9444119
Acid Extractable Iron (Fe)	mg/kg	15000	20000	50	26000	50	13000	28000	16000	50	9444119
Acid Extractable Lead (Pb)	mg/kg	71	110	0.50	450	0.50	69	370	59	0.50	9444119
Acid Extractable Lithium (Li)	mg/kg	13	31	2.0	30	2.0	12	26	16	2.0	9444119
Acid Extractable Manganese (Mn)	mg/kg	2200	1200	2.0	2200	2.0	1800	4200	2800	2.0	9444119
Acid Extractable Mercury (Hg)	mg/kg	<0.10	0.19	0.10	0.12	0.10	<0.10	<0.10	<0.10	0.10	9444119
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	2.9	2.0	2.5	2.0	<2.0	2.6	<2.0	2.0	9444119
Acid Extractable Nickel (Ni)	mg/kg	9.8	21	2.0	24	2.0	9.4	22	12	2.0	9444119
Acid Extractable Rubidium (Rb)	mg/kg	7.2	16	2.0	15	2.0	6.2	14	7.5	2.0	9444119
Acid Extractable Selenium (Se)	mg/kg	<0.50	2.9	0.50	1.2	0.50	<0.50	0.84	<0.50	0.50	9444119
Acid Extractable Silver (Ag)	mg/kg	0.71	1.4	0.50	1.2	0.50	0.51	1.0	1.1	0.50	9444119
Acid Extractable Strontium (Sr)	mg/kg	150	640	5.0	7200	50	110	290	180	5.0	9444119
Acid Extractable Thallium (Tl)	mg/kg	0.14	0.36	0.10	0.35	0.10	0.12	0.33	0.20	0.10	9444119
Acid Extractable Tin (Sn)	mg/kg	<1.0	<1.0	1.0	<1.0	1.0	<1.0	<1.0	<1.0	1.0	9444119
Acid Extractable Uranium (U)	mg/kg	1.5	4.9	0.10	2.8	0.10	1.0	2.5	1.8	0.10	9444119
Acid Extractable Vanadium (V)	mg/kg	18	34	2.0	34	2.0	16	34	22	2.0	9444119
Acid Extractable Zinc (Zn)	mg/kg	240	520	5.0	870	5.0	240	780	350	5.0	9444119

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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GENERAL COMMENTS

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9443997	BBD	QC Standard	Organic Carbon (TOC)	2024/06/10		92	%	75 - 125
9443997	BBD	Method Blank	Organic Carbon (TOC)	2024/06/10	<0.50		g/kg	
9443997	BBD	RPD [ZIJ523-01]	Organic Carbon (TOC)	2024/06/10	0.95		%	35
9444119	MTZ	Matrix Spike [ZIJ524-01]	Acid Extractable Antimony (Sb)	2024/06/10		97	%	75 - 125
			Acid Extractable Arsenic (As)	2024/06/10		103	%	75 - 125
			Acid Extractable Barium (Ba)	2024/06/10		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2024/06/10		107	%	75 - 125
			Acid Extractable Bismuth (Bi)	2024/06/10		106	%	75 - 125
			Acid Extractable Boron (B)	2024/06/10		87	%	75 - 125
			Acid Extractable Cadmium (Cd)	2024/06/10		103	%	75 - 125
			Acid Extractable Chromium (Cr)	2024/06/10		105	%	75 - 125
			Acid Extractable Cobalt (Co)	2024/06/10		104	%	75 - 125
			Acid Extractable Copper (Cu)	2024/06/10		101	%	75 - 125
			Acid Extractable Lead (Pb)	2024/06/10		NC	%	75 - 125
			Acid Extractable Lithium (Li)	2024/06/10		110	%	75 - 125
			Acid Extractable Manganese (Mn)	2024/06/10		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2024/06/10		103	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2024/06/10		102	%	75 - 125
			Acid Extractable Nickel (Ni)	2024/06/10		106	%	75 - 125
			Acid Extractable Rubidium (Rb)	2024/06/10		97	%	75 - 125
			Acid Extractable Selenium (Se)	2024/06/10		105	%	75 - 125
			Acid Extractable Silver (Ag)	2024/06/10		105	%	75 - 125
			Acid Extractable Strontium (Sr)	2024/06/10		NC	%	75 - 125
			Acid Extractable Thallium (Tl)	2024/06/10		106	%	75 - 125
			Acid Extractable Tin (Sn)	2024/06/10		103	%	75 - 125
			Acid Extractable Uranium (U)	2024/06/10		110	%	75 - 125
			Acid Extractable Vanadium (V)	2024/06/10		106	%	75 - 125
			Acid Extractable Zinc (Zn)	2024/06/10		NC	%	75 - 125
9444119	MTZ	Spiked Blank	Acid Extractable Antimony (Sb)	2024/06/10		105	%	75 - 125
			Acid Extractable Arsenic (As)	2024/06/10		102	%	75 - 125
			Acid Extractable Barium (Ba)	2024/06/10		98	%	75 - 125
			Acid Extractable Beryllium (Be)	2024/06/10		101	%	75 - 125
			Acid Extractable Bismuth (Bi)	2024/06/10		99	%	75 - 125
			Acid Extractable Boron (B)	2024/06/10		102	%	75 - 125
			Acid Extractable Cadmium (Cd)	2024/06/10		100	%	75 - 125
			Acid Extractable Chromium (Cr)	2024/06/10		102	%	75 - 125
			Acid Extractable Cobalt (Co)	2024/06/10		100	%	75 - 125
			Acid Extractable Copper (Cu)	2024/06/10		99	%	75 - 125
			Acid Extractable Lead (Pb)	2024/06/10		99	%	75 - 125
			Acid Extractable Lithium (Li)	2024/06/10		100	%	75 - 125
			Acid Extractable Manganese (Mn)	2024/06/10		102	%	75 - 125
			Acid Extractable Mercury (Hg)	2024/06/10		101	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2024/06/10		105	%	75 - 125
			Acid Extractable Nickel (Ni)	2024/06/10		103	%	75 - 125
			Acid Extractable Rubidium (Rb)	2024/06/10		102	%	75 - 125
			Acid Extractable Selenium (Se)	2024/06/10		102	%	75 - 125
			Acid Extractable Silver (Ag)	2024/06/10		101	%	75 - 125
			Acid Extractable Strontium (Sr)	2024/06/10		100	%	75 - 125
			Acid Extractable Thallium (Tl)	2024/06/10		102	%	75 - 125
			Acid Extractable Tin (Sn)	2024/06/10		101	%	75 - 125
			Acid Extractable Uranium (U)	2024/06/10		100	%	75 - 125
			Acid Extractable Vanadium (V)	2024/06/10		102	%	75 - 125
			Acid Extractable Zinc (Zn)	2024/06/10		103	%	75 - 125
9444119	MTZ	Method Blank	Acid Extractable Aluminum (Al)	2024/06/10	<10		mg/kg	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Antimony (Sb)	2024/06/10	<2.0		mg/kg	
			Acid Extractable Arsenic (As)	2024/06/10	<2.0		mg/kg	
			Acid Extractable Barium (Ba)	2024/06/10	<5.0		mg/kg	
			Acid Extractable Beryllium (Be)	2024/06/10	<1.0		mg/kg	
			Acid Extractable Bismuth (Bi)	2024/06/10	<2.0		mg/kg	
			Acid Extractable Boron (B)	2024/06/10	<50		mg/kg	
			Acid Extractable Cadmium (Cd)	2024/06/10	<0.30		mg/kg	
			Acid Extractable Chromium (Cr)	2024/06/10	<2.0		mg/kg	
			Acid Extractable Cobalt (Co)	2024/06/10	<1.0		mg/kg	
			Acid Extractable Copper (Cu)	2024/06/10	<2.0		mg/kg	
			Acid Extractable Iron (Fe)	2024/06/10	<50		mg/kg	
			Acid Extractable Lead (Pb)	2024/06/10	<0.50		mg/kg	
			Acid Extractable Lithium (Li)	2024/06/10	<2.0		mg/kg	
			Acid Extractable Manganese (Mn)	2024/06/10	<2.0		mg/kg	
			Acid Extractable Mercury (Hg)	2024/06/10	<0.10		mg/kg	
			Acid Extractable Molybdenum (Mo)	2024/06/10	<2.0		mg/kg	
			Acid Extractable Nickel (Ni)	2024/06/10	<2.0		mg/kg	
			Acid Extractable Rubidium (Rb)	2024/06/10	<2.0		mg/kg	
			Acid Extractable Selenium (Se)	2024/06/10	<0.50		mg/kg	
			Acid Extractable Silver (Ag)	2024/06/10	<0.50		mg/kg	
			Acid Extractable Strontium (Sr)	2024/06/10	<5.0		mg/kg	
			Acid Extractable Thallium (Tl)	2024/06/10	<0.10		mg/kg	
			Acid Extractable Tin (Sn)	2024/06/10	<1.0		mg/kg	
			Acid Extractable Uranium (U)	2024/06/10	<0.10		mg/kg	
			Acid Extractable Vanadium (V)	2024/06/10	<2.0		mg/kg	
			Acid Extractable Zinc (Zn)	2024/06/10	<5.0		mg/kg	
9444119	MTZ	RPD [ZIJ524-01]	Acid Extractable Aluminum (Al)	2024/06/10	3.9		%	35
			Acid Extractable Antimony (Sb)	2024/06/10	NC		%	35
			Acid Extractable Arsenic (As)	2024/06/10	3.8		%	35
			Acid Extractable Barium (Ba)	2024/06/10	3.6		%	35
			Acid Extractable Beryllium (Be)	2024/06/10	6.1		%	35
			Acid Extractable Bismuth (Bi)	2024/06/10	NC		%	35
			Acid Extractable Boron (B)	2024/06/10	NC		%	35
			Acid Extractable Cadmium (Cd)	2024/06/10	1.8		%	35
			Acid Extractable Chromium (Cr)	2024/06/10	5.0		%	35
			Acid Extractable Cobalt (Co)	2024/06/10	1.1		%	35
			Acid Extractable Copper (Cu)	2024/06/10	3.4		%	35
			Acid Extractable Iron (Fe)	2024/06/10	5.1		%	35
			Acid Extractable Lead (Pb)	2024/06/10	4.0		%	35
			Acid Extractable Lithium (Li)	2024/06/10	6.3		%	35
			Acid Extractable Manganese (Mn)	2024/06/10	2.4		%	35
			Acid Extractable Mercury (Hg)	2024/06/10	1.9		%	35
			Acid Extractable Molybdenum (Mo)	2024/06/10	4.5		%	35
			Acid Extractable Nickel (Ni)	2024/06/10	4.5		%	35
			Acid Extractable Rubidium (Rb)	2024/06/10	5.7		%	35
			Acid Extractable Selenium (Se)	2024/06/10	2.3		%	35
			Acid Extractable Silver (Ag)	2024/06/10	2.5		%	35
			Acid Extractable Strontium (Sr)	2024/06/10	3.6		%	35
			Acid Extractable Thallium (Tl)	2024/06/10	9.1		%	35
			Acid Extractable Tin (Sn)	2024/06/10	NC		%	35
			Acid Extractable Uranium (U)	2024/06/10	5.0		%	35
			Acid Extractable Vanadium (V)	2024/06/10	5.4		%	35

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Bureau Veritas Job #: C4G5582
Report Date: 2024/06/11

Dillon Consulting Limited
Client Project #: 223723
Site Location: LAKE ENON

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Zinc (Zn)	2024/06/10	5.4		%	35

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

Bureau Veritas 465 George St., Unit G, Sydney, NS, B1P 1K5 Tel:902 567 1255 Toll Free: 888 535 7770 Fax: 902 539 6504 www.bvna.com

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Colleen Acker, B.Sc, Scientific Service Specialist

Bureau Veritas Proprietary Software
Logiciel Propriétaire de Bureau Veritas

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Your Project #: 22-3723-1003
Site Location: LAKE ENON

Attention: Nadine Wambolt

Dillon Consulting Limited
275 Charlotte St
Sydney, NS
CANADA B1P 1C6

Report Date: 2024/07/30
Report #: R8256275
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4M2938
Received: 2024/07/22, 10:20

Sample Matrix: Soil
Samples Received: 19

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Metals Solids Acid Extr. ICPMS (1)	11	2024/07/26	2024/07/29	ATL SOP 00058	EPA 6020B R2 m
Metals Solids Acid Extr. ICPMS (1)	2	2024/07/29	2024/07/29	ATL SOP 00058	EPA 6020B R2 m
Metals Solids Acid Extr. ICPMS (1)	6	2024/07/29	2024/07/30	ATL SOP 00058	EPA 6020B R2 m
Total Organic Carbon in Soil (1)	19	2024/07/29	2024/07/29	ATL SOP 00044	LECO203601224 1991 m

Remarks:

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All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

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Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Bedford, 200 Bluewater Rd Suite 105, Bedford, NS, B4B 1G9

Your Project #: 22-3723
Site Location: LAKE ENON

Attention: Nadine Wambolt

Dillon Consulting Limited
275 Charlotte St
Sydney, NS
CANADA B1P 1C6

Report Date: 2024/04/26
Report #: R8124912
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4B9535
Received: 2024/04/19, 15:00

Sample Matrix: Water
Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Total Suspended Solids	3	N/A	2024/04/24	SYD SOP 00165	SM 24 2540D m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

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Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Your Project #: 22-3723
Site Location: LAKE ENON

Attention: Nadine Wambolt

Dillon Consulting Limited
275 Charlotte St
Sydney, NS
CANADA B1P 1C6

Report Date: 2024/04/26
Report #: R8124912
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4B9535
Received: 2024/04/19, 15:00

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AUTHORIZED REPORT
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Bureau Veritas
26 Apr 2024 16:04:25

Please direct all questions regarding this Certificate of Analysis to:
Natalie MacAskill, Key Account Specialist
Email: Natalie.MacAskill@bureauveritas.com
Phone# (902)567-1255 Ext:17

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Bureau Veritas Job #: C4B9535
Report Date: 2024/04/26

Dillon Consulting Limited
Client Project #: 22-3723
Site Location: LAKE ENON
Sampler Initials: ML

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		YYT916	YYT948	YYT952		
Sampling Date		2024/04/18 12:20	2024/04/18 14:13	2024/04/18 15:00		
	UNITS	WC2	AEC6AB	AEC7-6	RDL	QC Batch
Inorganics						
Total Suspended Solids	mg/L	3.0	2.5	<2.0	2.0	9352019

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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GENERAL COMMENTS

Results relate only to the items tested.

Bureau Veritas 465 George St., Unit G, Sydney, NS, B1P 1K5 Tel:902 567 1255 Toll Free: 888 535 7770 Fax: 902 539 6504 www.bvna.com

Bureau Veritas Job #: C4B9535
Report Date: 2024/04/26

Dillon Consulting Limited
Client Project #: 22-3723
Site Location: LAKE ENON
Sampler Initials: ML

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9352019	TML	Spiked Blank	Total Suspended Solids	2024/04/24		99	%	75 - 125
9352019	TML	Method Blank	Total Suspended Solids	2024/04/24	<2.0		mg/L	
9352019	TML	RPD	Total Suspended Solids	2024/04/24	9.3		%	25

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

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Bureau Veritas Job #: C4B9535
Report Date: 2024/04/26

Dillon Consulting Limited
Client Project #: 22-3723
Site Location: LAKE ENON
Sampler Initials: ML

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

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Your Project #: 22-3723
Site Location: LAKE ENON
Your C.O.C. #: 968416-01-01

Attention: Nadine Wambolt

Dillon Consulting Limited
275 Charlotte St
Sydney, NS
CANADA B1P 1C6

Report Date: 2024/04/30
Report #: R8129445
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4B9973
Received: 2024/04/23, 13:41

Sample Matrix: Water
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Carbonate, Bicarbonate and Hydroxide (1)	4	N/A	2024/04/26	N/A	SM 24 4500-CO2 D
Alkalinity (1)	4	N/A	2024/04/25	ATL SOP 00142	SM 24 2320 B
Chloride (1)	4	N/A	2024/04/25	ATL SOP 00014	SM 24 4500-Cl- E m
Colour (1)	4	N/A	2024/04/25	ATL SOP 00020	SM 24 2120C m
Conductance - water (1)	4	N/A	2024/04/25	ATL SOP 00004	SM 24 2510B m
Hardness (calculated as CaCO3) (1)	2	N/A	2024/04/25	ATL SOP 00048	Auto Calc
Hardness (calculated as CaCO3) (1)	2	N/A	2024/04/26	ATL SOP 00048	Auto Calc
Mercury - Total (CVAA,LL) (1)	3	2024/04/26	2024/04/29	ATL SOP 00026	EPA 245.1 R3 m
Mercury - Total (CVAA,LL) (1)	1	2024/04/30	2024/04/30	ATL SOP 00026	EPA 245.1 R3 m
Metals Water Total MS (1)	2	2024/04/24	2024/04/24	ATL SOP 00058	EPA 6020B R2 m
Metals Water Total MS (1)	2	2024/04/24	2024/04/25	ATL SOP 00058	EPA 6020B R2 m
Ion Balance (% Difference) (1)	4	N/A	2024/04/29	N/A	Auto Calc.
Anion and Cation Sum (1)	4	N/A	2024/04/26	N/A	Auto Calc.
Nitrogen Ammonia - water (1)	4	N/A	2024/04/25	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen - Nitrate + Nitrite (1)	4	N/A	2024/04/25	ATL SOP 00016	USGS I-2547-11m
Nitrogen - Nitrite (1)	4	N/A	2024/04/25	ATL SOP 00017	SM 24 4500-NO2- B m
Nitrogen - Nitrate (as N) (1)	4	N/A	2024/04/29	ATL SOP 00018	ASTM D3867-16
pH (1, 2)	4	N/A	2024/04/25	ATL SOP 00003	SM 24 4500-H+ B m
Phosphorus - ortho (1)	4	N/A	2024/04/25	ATL SOP 00021	SM 24 4500-P E m
Sat. pH and Langelier Index (@ 20C) (1)	4	N/A	2024/04/29	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C) (1)	4	N/A	2024/04/29	ATL SOP 00049	Auto Calc.
Reactive Silica (1)	4	N/A	2024/04/26	ATL SOP 00022	EPA 366.0 m
Sulphate (1)	4	N/A	2024/04/25	ATL SOP 00023	ASTM D516-16 m
Total Dissolved Solids (TDS calc) (1)	4	N/A	2024/04/29	N/A	Auto Calc.
Organic carbon - Total (TOC) (1, 3)	4	N/A	2024/04/24	ATL SOP 00203	SM 24 5310B m
Turbidity (1)	4	N/A	2024/04/25	ATL SOP 00011	EPA 180.1 R2 m

Remarks:

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All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession

Your Project #: 22-3723
Site Location: LAKE ENON
Your C.O.C. #: 968416-01-01

Attention: Nadine Wambolt

Dillon Consulting Limited
275 Charlotte St
Sydney, NS
CANADA B1P 1C6

Report Date: 2024/04/30
Report #: R8129445
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4B9973
Received: 2024/04/23, 13:41

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* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Bedford, 200 Bluewater Rd Suite 105, Bedford, NS, B4B 1G9
(2) The APHA Standard Method requires pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the APHA Standard Method holding time.
(3) TOC / DOC present in the sample should be considered as non-purgeable TOC / DOC.

Encryption Key

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RAPPORT AUTORISÉ

Bureau Veritas
30 Apr 2024 15:38:26

Please direct all questions regarding this Certificate of Analysis to:
Natalie MacAskill, Key Account Specialist
Email: Natalie.MacAskill@bureauveritas.com
Phone# (902)567-1255 Ext:17

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Bureau Veritas Job #: C4B9973
Report Date: 2024/04/30

Dillon Consulting Limited
Client Project #: 22-3723
Site Location: LAKE ENON
Sampler Initials: JM

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		YYW569		YYW570		YYW571	YYW572		
Sampling Date		2024/04/18 14:45		2024/04/18 12:35		2024/04/18 13:35	2024/04/18		
COC Number		968416-01-01		968416-01-01		968416-01-01	968416-01-01		
	UNITS	WC1	QC Batch	WC2	QC Batch	WC3	WCDUP	RDL	QC Batch
Calculated Parameters									
Anion Sum	me/L	0.940	9349437	1.87	9349437	1.77	0.950	N/A	9349437
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	34	9349429	62	9349429	60	34	1.0	9349429
Calculated TDS	mg/L	55	9349446	110	9349446	100	55	1.0	9349446
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	9349429	<1.0	9349429	<1.0	<1.0	1.0	9349429
Cation Sum	me/L	1.09	9349437	2.00	9349437	1.95	1.08	N/A	9349437
Hardness (CaCO3)	mg/L	45	9349434	92	9349434	90	44	1.0	9349434
Ion Balance (% Difference)	%	7.39	9349436	3.36	9349436	4.84	6.40	N/A	9349436
Langelier Index (@ 20C)	N/A	-1.03	9349443	-0.139	9349443	-0.157	-1.04		9349443
Langelier Index (@ 4C)	N/A	-1.28	9349444	-0.390	9349444	-0.408	-1.29		9349444
Nitrate (N)	mg/L	0.070	9349439	<0.050	9349439	<0.050	0.074	0.050	9349439
Saturation pH (@ 20C)	N/A	8.61	9349443	8.06	9349443	8.09	8.61		9349443
Saturation pH (@ 4C)	N/A	8.86	9349444	8.32	9349444	8.34	8.86		9349444
Inorganics									
Total Alkalinity (Total as CaCO3)	mg/L	34	9354588	63	9354598	61	34	2.0	9354588
Dissolved Chloride (Cl-)	mg/L	4.3	9354527	4.0	9354527	3.9	4.2	1.0	9354527
Colour	TCU	20	9354543	16	9354543	17	26	5.0	9354543
Nitrate + Nitrite (N)	mg/L	0.070	9354545	<0.050	9354545	<0.050	0.074	0.050	9354545
Nitrite (N)	mg/L	<0.010	9354546	<0.010	9354546	<0.010	<0.010	0.010	9354546
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	9354579	<0.050	9354579	<0.050	<0.050	0.050	9354579
Total Organic Carbon (C)	mg/L	3.5	9353034	3.3	9353034	3.1	3.4	0.50	9353034
Orthophosphate (P)	mg/L	<0.010	9354544	<0.010	9354544	<0.010	<0.010	0.010	9354544
pH	pH	7.58	9354584	7.93	9354592	7.93	7.57		9354584
Reactive Silica (SiO2)	mg/L	1.8	9354542	1.2	9354542	1.7	1.9	0.50	9354542
Dissolved Sulphate (SO4)	mg/L	6.6	9354541	24	9354541	21	6.8	2.0	9354541
Turbidity	NTU	3.6	9354628	5.2	9354628	4.8	3.8	0.10	9354628
Conductivity	uS/cm	110	9354586	210	9354596	200	110	1.0	9354586

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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Bureau Veritas Job #: C4B9973
Report Date: 2024/04/30

Dillon Consulting Limited
Client Project #: 22-3723
Site Location: LAKE ENON
Sampler Initials: JM

MERCURY BY COLD VAPOUR AA (WATER)

Bureau Veritas ID		YYW569	YYW570	YYW571		YYW572		
Sampling Date		2024/04/18 14:45	2024/04/18 12:35	2024/04/18 13:35		2024/04/18		
COC Number		968416-01-01	968416-01-01	968416-01-01		968416-01-01		
	UNITS	WC1	WC2	WC3	QC Batch	WCDUP	RDL	QC Batch
Metals								
Total Mercury (Hg)	ug/L	<0.013	<0.013	<0.013	9358191	<0.013	0.013	9363388

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C4B9973
Report Date: 2024/04/30

Dillon Consulting Limited
Client Project #: 22-3723
Site Location: LAKE ENON
Sampler Initials: JM

ELEMENTS BY ICP/MS (WATER)

Bureau Veritas ID		YYW569			YYW570		YYW571		
Sampling Date		2024/04/18 14:45			2024/04/18 12:35		2024/04/18 13:35		
COC Number		968416-01-01			968416-01-01		968416-01-01		
	UNITS	WC1	RDL	QC Batch	WC2	QC Batch	WC3	RDL	QC Batch
Metals									
Total Aluminum (Al)	ug/L	180	5.0	9352491	180	9352498	120	5.0	9352491
Total Antimony (Sb)	ug/L	<1.0	1.0	9352491	<1.0	9352498	<1.0	1.0	9352491
Total Arsenic (As)	ug/L	<1.0	1.0	9352491	<1.0	9352498	<1.0	1.0	9352491
Total Barium (Ba)	ug/L	97	1.0	9352491	210	9352498	220	1.0	9352491
Total Beryllium (Be)	ug/L	<0.10	0.10	9352491	<0.10	9352498	<0.10	0.10	9352491
Total Bismuth (Bi)	ug/L	<2.0	2.0	9352491	<2.0	9352498	<2.0	2.0	9352491
Total Boron (B)	ug/L	<50	50	9352491	<50	9352498	<50	50	9352491
Total Cadmium (Cd)	ug/L	0.11	0.010	9352491	0.084	9352498	0.047	0.010	9352491
Total Calcium (Ca)	ug/L	15000	100	9352491	31000	9352498	30000	100	9352491
Total Chromium (Cr)	ug/L	<1.0	1.0	9352491	<1.0	9352498	<1.0	1.0	9352491
Total Cobalt (Co)	ug/L	<0.40	0.40	9352491	<0.40	9352498	<0.40	0.40	9352491
Total Copper (Cu)	ug/L	0.53	0.50	9352491	0.75	9352498	0.70	0.50	9352491
Total Iron (Fe)	ug/L	180	50	9352491	150	9352498	99	50	9352491
Total Lead (Pb)	ug/L	1.2	0.50	9352491	4.7	9352498	5.5	0.50	9352491
Total Magnesium (Mg)	ug/L	1700	100	9352491	3700	9352498	3700	100	9352491
Total Manganese (Mn)	ug/L	50	2.0	9352491	59	9352498	88	2.0	9352491
Total Molybdenum (Mo)	ug/L	<2.0	2.0	9352491	<2.0	9352498	<2.0	2.0	9352491
Total Nickel (Ni)	ug/L	<2.0	2.0	9352491	<2.0	9352498	<2.0	2.0	9352491
Total Phosphorus (P)	ug/L	<100	100	9352491	<100	9352498	<100	100	9352491
Total Potassium (K)	ug/L	410	100	9352491	790	9352498	730	100	9352491
Total Selenium (Se)	ug/L	<0.50	0.50	9352491	0.71	9352498	0.74	0.50	9352491
Total Silver (Ag)	ug/L	<0.10	0.10	9352491	<0.10	9352498	<0.10	0.10	9352491
Total Sodium (Na)	ug/L	4200	100	9352491	3300	9352498	3100	100	9352491
Total Strontium (Sr)	ug/L	2200	2.0	9352491	7900	9352498	6800	20	9352491
Total Thallium (Tl)	ug/L	<0.10	0.10	9352491	<0.10	9352498	<0.10	0.10	9352491
Total Tin (Sn)	ug/L	<2.0	2.0	9352491	<2.0	9352498	<2.0	2.0	9352491
Total Titanium (Ti)	ug/L	4.8	2.0	9352491	4.9	9352498	2.5	2.0	9352491
Total Uranium (U)	ug/L	0.24	0.10	9352491	0.74	9352498	0.72	0.10	9352491
Total Vanadium (V)	ug/L	<2.0	2.0	9352491	<2.0	9352498	<2.0	2.0	9352491
Total Zinc (Zn)	ug/L	36	5.0	9352491	29	9352498	30	5.0	9352491

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ELEMENTS BY ICP/MS (WATER)

Bureau Veritas ID		YYW572		
Sampling Date		2024/04/18		
COC Number		968416-01-01		
	UNITS	WCDUP	RDL	QC Batch
Metals				
Total Aluminum (Al)	ug/L	180	5.0	9352498
Total Antimony (Sb)	ug/L	<1.0	1.0	9352498
Total Arsenic (As)	ug/L	<1.0	1.0	9352498
Total Barium (Ba)	ug/L	97	1.0	9352498
Total Beryllium (Be)	ug/L	<0.10	0.10	9352498
Total Bismuth (Bi)	ug/L	<2.0	2.0	9352498
Total Boron (B)	ug/L	<50	50	9352498
Total Cadmium (Cd)	ug/L	0.11	0.010	9352498
Total Calcium (Ca)	ug/L	15000	100	9352498
Total Chromium (Cr)	ug/L	<1.0	1.0	9352498
Total Cobalt (Co)	ug/L	<0.40	0.40	9352498
Total Copper (Cu)	ug/L	0.54	0.50	9352498
Total Iron (Fe)	ug/L	180	50	9352498
Total Lead (Pb)	ug/L	1.3	0.50	9352498
Total Magnesium (Mg)	ug/L	1700	100	9352498
Total Manganese (Mn)	ug/L	51	2.0	9352498
Total Molybdenum (Mo)	ug/L	<2.0	2.0	9352498
Total Nickel (Ni)	ug/L	<2.0	2.0	9352498
Total Phosphorus (P)	ug/L	<100	100	9352498
Total Potassium (K)	ug/L	430	100	9352498
Total Selenium (Se)	ug/L	<0.50	0.50	9352498
Total Silver (Ag)	ug/L	<0.10	0.10	9352498
Total Sodium (Na)	ug/L	4200	100	9352498
Total Strontium (Sr)	ug/L	2200	2.0	9352498
Total Thallium (Tl)	ug/L	<0.10	0.10	9352498
Total Tin (Sn)	ug/L	<2.0	2.0	9352498
Total Titanium (Ti)	ug/L	4.3	2.0	9352498
Total Uranium (U)	ug/L	0.23	0.10	9352498
Total Vanadium (V)	ug/L	<2.0	2.0	9352498
Total Zinc (Zn)	ug/L	36	5.0	9352498

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QC Batch = Quality Control Batch

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GENERAL COMMENTS

Sample YYW569 [WC1] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample YYW572 [WCDUP] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9352491	MTZ	Matrix Spike	Total Aluminum (Al)	2024/04/24		101	%	80 - 120
			Total Antimony (Sb)	2024/04/24		102	%	80 - 120
			Total Arsenic (As)	2024/04/24		99	%	80 - 120
			Total Barium (Ba)	2024/04/24		97	%	80 - 120
			Total Beryllium (Be)	2024/04/24		102	%	80 - 120
			Total Bismuth (Bi)	2024/04/24		97	%	80 - 120
			Total Boron (B)	2024/04/24		104	%	80 - 120
			Total Cadmium (Cd)	2024/04/24		98	%	80 - 120
			Total Calcium (Ca)	2024/04/24		100	%	80 - 120
			Total Chromium (Cr)	2024/04/24		99	%	80 - 120
			Total Cobalt (Co)	2024/04/24		99	%	80 - 120
			Total Copper (Cu)	2024/04/24		99	%	80 - 120
			Total Iron (Fe)	2024/04/24		106	%	80 - 120
			Total Lead (Pb)	2024/04/24		97	%	80 - 120
			Total Magnesium (Mg)	2024/04/24		108	%	80 - 120
			Total Manganese (Mn)	2024/04/24		NC	%	80 - 120
			Total Molybdenum (Mo)	2024/04/24		103	%	80 - 120
			Total Nickel (Ni)	2024/04/24		99	%	80 - 120
			Total Phosphorus (P)	2024/04/24		105	%	80 - 120
			Total Potassium (K)	2024/04/24		103	%	80 - 120
			Total Selenium (Se)	2024/04/24		103	%	80 - 120
			Total Silver (Ag)	2024/04/24		96	%	80 - 120
			Total Sodium (Na)	2024/04/24		105	%	80 - 120
			Total Strontium (Sr)	2024/04/24		98	%	80 - 120
			Total Thallium (Tl)	2024/04/24		99	%	80 - 120
			Total Tin (Sn)	2024/04/24		100	%	80 - 120
			Total Titanium (Ti)	2024/04/24		97	%	80 - 120
			Total Uranium (U)	2024/04/24		102	%	80 - 120
			Total Vanadium (V)	2024/04/24		100	%	80 - 120
			Total Zinc (Zn)	2024/04/24		99	%	80 - 120
9352491	MTZ	Spiked Blank	Total Aluminum (Al)	2024/04/24		97	%	80 - 120
			Total Antimony (Sb)	2024/04/24		102	%	80 - 120
			Total Arsenic (As)	2024/04/24		99	%	80 - 120
			Total Barium (Ba)	2024/04/24		97	%	80 - 120
			Total Beryllium (Be)	2024/04/24		98	%	80 - 120
			Total Bismuth (Bi)	2024/04/24		99	%	80 - 120
			Total Boron (B)	2024/04/24		101	%	80 - 120
			Total Cadmium (Cd)	2024/04/24		100	%	80 - 120
			Total Calcium (Ca)	2024/04/24		99	%	80 - 120
			Total Chromium (Cr)	2024/04/24		100	%	80 - 120
			Total Cobalt (Co)	2024/04/24		99	%	80 - 120
			Total Copper (Cu)	2024/04/24		99	%	80 - 120
			Total Iron (Fe)	2024/04/24		103	%	80 - 120
			Total Lead (Pb)	2024/04/24		98	%	80 - 120
			Total Magnesium (Mg)	2024/04/24		110	%	80 - 120
			Total Manganese (Mn)	2024/04/24		100	%	80 - 120
			Total Molybdenum (Mo)	2024/04/24		101	%	80 - 120
			Total Nickel (Ni)	2024/04/24		100	%	80 - 120
			Total Phosphorus (P)	2024/04/24		103	%	80 - 120
			Total Potassium (K)	2024/04/24		102	%	80 - 120
			Total Selenium (Se)	2024/04/24		103	%	80 - 120
			Total Silver (Ag)	2024/04/24		98	%	80 - 120
			Total Sodium (Na)	2024/04/24		102	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Strontium (Sr)	2024/04/24		98	%	80 - 120
			Total Thallium (Tl)	2024/04/24		99	%	80 - 120
			Total Tin (Sn)	2024/04/24		102	%	80 - 120
			Total Titanium (Ti)	2024/04/24		99	%	80 - 120
			Total Uranium (U)	2024/04/24		103	%	80 - 120
			Total Vanadium (V)	2024/04/24		101	%	80 - 120
			Total Zinc (Zn)	2024/04/24		99	%	80 - 120
9352491	MTZ	Method Blank	Total Aluminum (Al)	2024/04/24	<5.0		ug/L	
			Total Antimony (Sb)	2024/04/24	<1.0		ug/L	
			Total Arsenic (As)	2024/04/24	<1.0		ug/L	
			Total Barium (Ba)	2024/04/24	<1.0		ug/L	
			Total Beryllium (Be)	2024/04/24	<0.10		ug/L	
			Total Bismuth (Bi)	2024/04/24	<2.0		ug/L	
			Total Boron (B)	2024/04/24	<50		ug/L	
			Total Cadmium (Cd)	2024/04/24	<0.010		ug/L	
			Total Calcium (Ca)	2024/04/24	<100		ug/L	
			Total Chromium (Cr)	2024/04/24	<1.0		ug/L	
			Total Cobalt (Co)	2024/04/24	<0.40		ug/L	
			Total Copper (Cu)	2024/04/24	<0.50		ug/L	
			Total Iron (Fe)	2024/04/24	<50		ug/L	
			Total Lead (Pb)	2024/04/24	<0.50		ug/L	
			Total Magnesium (Mg)	2024/04/24	<100		ug/L	
			Total Manganese (Mn)	2024/04/24	<2.0		ug/L	
			Total Molybdenum (Mo)	2024/04/24	<2.0		ug/L	
			Total Nickel (Ni)	2024/04/24	<2.0		ug/L	
			Total Phosphorus (P)	2024/04/24	<100		ug/L	
			Total Potassium (K)	2024/04/24	<100		ug/L	
			Total Selenium (Se)	2024/04/24	<0.50		ug/L	
			Total Silver (Ag)	2024/04/24	<0.10		ug/L	
			Total Sodium (Na)	2024/04/24	<100		ug/L	
			Total Strontium (Sr)	2024/04/24	<2.0		ug/L	
			Total Thallium (Tl)	2024/04/24	<0.10		ug/L	
			Total Tin (Sn)	2024/04/24	<2.0		ug/L	
			Total Titanium (Ti)	2024/04/24	<2.0		ug/L	
			Total Uranium (U)	2024/04/24	<0.10		ug/L	
			Total Vanadium (V)	2024/04/24	<2.0		ug/L	
			Total Zinc (Zn)	2024/04/24	<5.0		ug/L	
9352491	MTZ	RPD	Total Aluminum (Al)	2024/04/24	NC		%	20
			Total Antimony (Sb)	2024/04/24	NC		%	20
			Total Arsenic (As)	2024/04/24	NC		%	20
			Total Barium (Ba)	2024/04/24	NC		%	20
			Total Beryllium (Be)	2024/04/24	NC		%	20
			Total Bismuth (Bi)	2024/04/24	NC		%	20
			Total Boron (B)	2024/04/24	NC		%	20
			Total Cadmium (Cd)	2024/04/24	NC		%	20
			Total Calcium (Ca)	2024/04/24	NC		%	20
			Total Chromium (Cr)	2024/04/24	NC		%	20
			Total Cobalt (Co)	2024/04/24	NC		%	20
			Total Copper (Cu)	2024/04/24	2.2		%	20
			Total Iron (Fe)	2024/04/24	NC		%	20
			Total Lead (Pb)	2024/04/24	NC		%	20
			Total Magnesium (Mg)	2024/04/24	NC		%	20
			Total Manganese (Mn)	2024/04/24	NC		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Molybdenum (Mo)	2024/04/24	NC		%	20
			Total Nickel (Ni)	2024/04/24	NC		%	20
			Total Phosphorus (P)	2024/04/24	NC		%	20
			Total Potassium (K)	2024/04/24	NC		%	20
			Total Selenium (Se)	2024/04/24	NC		%	20
			Total Silver (Ag)	2024/04/24	NC		%	20
			Total Sodium (Na)	2024/04/24	0.65		%	20
			Total Strontium (Sr)	2024/04/24	NC		%	20
			Total Thallium (Tl)	2024/04/24	NC		%	20
			Total Tin (Sn)	2024/04/24	NC		%	20
			Total Titanium (Ti)	2024/04/24	NC		%	20
			Total Uranium (U)	2024/04/24	NC		%	20
			Total Vanadium (V)	2024/04/24	NC		%	20
			Total Zinc (Zn)	2024/04/24	NC		%	20
9352498	MTZ	Matrix Spike	Total Aluminum (Al)	2024/04/24		95	%	80 - 120
			Total Antimony (Sb)	2024/04/24		103	%	80 - 120
			Total Arsenic (As)	2024/04/24		99	%	80 - 120
			Total Barium (Ba)	2024/04/24		95	%	80 - 120
			Total Beryllium (Be)	2024/04/24		102	%	80 - 120
			Total Bismuth (Bi)	2024/04/24		97	%	80 - 120
			Total Boron (B)	2024/04/24		103	%	80 - 120
			Total Cadmium (Cd)	2024/04/24		98	%	80 - 120
			Total Calcium (Ca)	2024/04/24		NC	%	80 - 120
			Total Chromium (Cr)	2024/04/24		97	%	80 - 120
			Total Cobalt (Co)	2024/04/24		96	%	80 - 120
			Total Copper (Cu)	2024/04/24		94	%	80 - 120
			Total Iron (Fe)	2024/04/24		100	%	80 - 120
			Total Lead (Pb)	2024/04/24		97	%	80 - 120
			Total Magnesium (Mg)	2024/04/24		104	%	80 - 120
			Total Manganese (Mn)	2024/04/24		98	%	80 - 120
			Total Molybdenum (Mo)	2024/04/24		102	%	80 - 120
			Total Nickel (Ni)	2024/04/24		97	%	80 - 120
			Total Phosphorus (P)	2024/04/24		105	%	80 - 120
			Total Potassium (K)	2024/04/24		101	%	80 - 120
			Total Selenium (Se)	2024/04/24		101	%	80 - 120
			Total Silver (Ag)	2024/04/24		97	%	80 - 120
			Total Sodium (Na)	2024/04/24		100	%	80 - 120
			Total Strontium (Sr)	2024/04/24		95	%	80 - 120
			Total Thallium (Tl)	2024/04/24		98	%	80 - 120
			Total Tin (Sn)	2024/04/24		102	%	80 - 120
			Total Titanium (Ti)	2024/04/24		100	%	80 - 120
			Total Uranium (U)	2024/04/24		104	%	80 - 120
			Total Vanadium (V)	2024/04/24		98	%	80 - 120
			Total Zinc (Zn)	2024/04/24		96	%	80 - 120
9352498	MTZ	Spiked Blank	Total Aluminum (Al)	2024/04/24		99	%	80 - 120
			Total Antimony (Sb)	2024/04/24		103	%	80 - 120
			Total Arsenic (As)	2024/04/24		100	%	80 - 120
			Total Barium (Ba)	2024/04/24		97	%	80 - 120
			Total Beryllium (Be)	2024/04/24		102	%	80 - 120
			Total Bismuth (Bi)	2024/04/24		99	%	80 - 120
			Total Boron (B)	2024/04/24		106	%	80 - 120
			Total Cadmium (Cd)	2024/04/24		99	%	80 - 120
			Total Calcium (Ca)	2024/04/24		98	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Chromium (Cr)	2024/04/24		101	%	80 - 120
			Total Cobalt (Co)	2024/04/24		100	%	80 - 120
			Total Copper (Cu)	2024/04/24		100	%	80 - 120
			Total Iron (Fe)	2024/04/24		105	%	80 - 120
			Total Lead (Pb)	2024/04/24		98	%	80 - 120
			Total Magnesium (Mg)	2024/04/24		110	%	80 - 120
			Total Manganese (Mn)	2024/04/24		101	%	80 - 120
			Total Molybdenum (Mo)	2024/04/24		103	%	80 - 120
			Total Nickel (Ni)	2024/04/24		101	%	80 - 120
			Total Phosphorus (P)	2024/04/24		105	%	80 - 120
			Total Potassium (K)	2024/04/24		104	%	80 - 120
			Total Selenium (Se)	2024/04/24		101	%	80 - 120
			Total Silver (Ag)	2024/04/24		97	%	80 - 120
			Total Sodium (Na)	2024/04/24		105	%	80 - 120
			Total Strontium (Sr)	2024/04/24		98	%	80 - 120
			Total Thallium (Tl)	2024/04/24		99	%	80 - 120
			Total Tin (Sn)	2024/04/24		103	%	80 - 120
			Total Titanium (Ti)	2024/04/24		103	%	80 - 120
			Total Uranium (U)	2024/04/24		102	%	80 - 120
			Total Vanadium (V)	2024/04/24		102	%	80 - 120
			Total Zinc (Zn)	2024/04/24		100	%	80 - 120
9352498	MTZ	Method Blank	Total Aluminum (Al)	2024/04/24	<5.0		ug/L	
			Total Antimony (Sb)	2024/04/24	<1.0		ug/L	
			Total Arsenic (As)	2024/04/24	<1.0		ug/L	
			Total Barium (Ba)	2024/04/24	<1.0		ug/L	
			Total Beryllium (Be)	2024/04/24	<0.10		ug/L	
			Total Bismuth (Bi)	2024/04/24	<2.0		ug/L	
			Total Boron (B)	2024/04/24	<50		ug/L	
			Total Cadmium (Cd)	2024/04/24	<0.010		ug/L	
			Total Calcium (Ca)	2024/04/24	<100		ug/L	
			Total Chromium (Cr)	2024/04/24	<1.0		ug/L	
			Total Cobalt (Co)	2024/04/24	<0.40		ug/L	
			Total Copper (Cu)	2024/04/24	<0.50		ug/L	
			Total Iron (Fe)	2024/04/24	<50		ug/L	
			Total Lead (Pb)	2024/04/24	<0.50		ug/L	
			Total Magnesium (Mg)	2024/04/24	<100		ug/L	
			Total Manganese (Mn)	2024/04/24	<2.0		ug/L	
			Total Molybdenum (Mo)	2024/04/24	<2.0		ug/L	
			Total Nickel (Ni)	2024/04/24	<2.0		ug/L	
			Total Phosphorus (P)	2024/04/24	<100		ug/L	
			Total Potassium (K)	2024/04/24	<100		ug/L	
			Total Selenium (Se)	2024/04/24	<0.50		ug/L	
			Total Silver (Ag)	2024/04/24	<0.10		ug/L	
			Total Sodium (Na)	2024/04/24	<100		ug/L	
			Total Strontium (Sr)	2024/04/24	<2.0		ug/L	
			Total Thallium (Tl)	2024/04/24	<0.10		ug/L	
			Total Tin (Sn)	2024/04/24	<2.0		ug/L	
			Total Titanium (Ti)	2024/04/24	<2.0		ug/L	
			Total Uranium (U)	2024/04/24	<0.10		ug/L	
			Total Vanadium (V)	2024/04/24	<2.0		ug/L	
			Total Zinc (Zn)	2024/04/24	<5.0		ug/L	
9352498	MTZ	RPD	Total Aluminum (Al)	2024/04/24	6.3		%	20
			Total Antimony (Sb)	2024/04/24	NC		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Arsenic (As)	2024/04/24	NC		%	20
			Total Barium (Ba)	2024/04/24	4.0		%	20
			Total Beryllium (Be)	2024/04/24	NC		%	20
			Total Bismuth (Bi)	2024/04/24	NC		%	20
			Total Boron (B)	2024/04/24	NC		%	20
			Total Cadmium (Cd)	2024/04/24	18		%	20
			Total Calcium (Ca)	2024/04/24	3.0		%	20
			Total Chromium (Cr)	2024/04/24	NC		%	20
			Total Cobalt (Co)	2024/04/24	NC		%	20
			Total Copper (Cu)	2024/04/24	2.2		%	20
			Total Iron (Fe)	2024/04/24	NC		%	20
			Total Lead (Pb)	2024/04/24	NC		%	20
			Total Magnesium (Mg)	2024/04/24	3.3		%	20
			Total Manganese (Mn)	2024/04/24	NC		%	20
			Total Molybdenum (Mo)	2024/04/24	NC		%	20
			Total Nickel (Ni)	2024/04/24	NC		%	20
			Total Phosphorus (P)	2024/04/24	NC		%	20
			Total Potassium (K)	2024/04/24	2.2		%	20
			Total Selenium (Se)	2024/04/24	NC		%	20
			Total Silver (Ag)	2024/04/24	NC		%	20
			Total Sodium (Na)	2024/04/24	2.0		%	20
			Total Strontium (Sr)	2024/04/24	1.3		%	20
			Total Thallium (Tl)	2024/04/24	NC		%	20
			Total Tin (Sn)	2024/04/24	NC		%	20
			Total Titanium (Ti)	2024/04/24	NC		%	20
			Total Uranium (U)	2024/04/24	2.8		%	20
			Total Vanadium (V)	2024/04/24	NC		%	20
			Total Zinc (Zn)	2024/04/24	NC		%	20
9353034	CPP	Matrix Spike	Total Organic Carbon (C)	2024/04/24		97	%	85 - 115
9353034	CPP	Spiked Blank	Total Organic Carbon (C)	2024/04/24		97	%	80 - 120
9353034	CPP	Method Blank	Total Organic Carbon (C)	2024/04/24	<0.50		mg/L	
9353034	CPP	RPD	Total Organic Carbon (C)	2024/04/24	NC		%	15
9354527	EMT	Matrix Spike	Dissolved Chloride (Cl-)	2024/04/25		96	%	80 - 120
9354527	EMT	Spiked Blank	Dissolved Chloride (Cl-)	2024/04/25		101	%	80 - 120
9354527	EMT	Method Blank	Dissolved Chloride (Cl-)	2024/04/25	<1.0		mg/L	
9354527	EMT	RPD	Dissolved Chloride (Cl-)	2024/04/25	1.7		%	20
9354541	MCN	Matrix Spike	Dissolved Sulphate (SO4)	2024/04/25		93	%	80 - 120
9354541	MCN	Spiked Blank	Dissolved Sulphate (SO4)	2024/04/25		96	%	80 - 120
9354541	MCN	Method Blank	Dissolved Sulphate (SO4)	2024/04/25	<2.0		mg/L	
9354541	MCN	RPD	Dissolved Sulphate (SO4)	2024/04/25	5.4		%	20
9354542	MCN	Matrix Spike	Reactive Silica (SiO2)	2024/04/26		93	%	80 - 120
9354542	MCN	Spiked Blank	Reactive Silica (SiO2)	2024/04/26		94	%	80 - 120
9354542	MCN	Method Blank	Reactive Silica (SiO2)	2024/04/26	<0.50		mg/L	
9354542	MCN	RPD	Reactive Silica (SiO2)	2024/04/26	0.13		%	20
9354543	EMT	Spiked Blank	Colour	2024/04/25		111	%	80 - 120
9354543	EMT	Method Blank	Colour	2024/04/25	<5.0		TCU	
9354543	EMT	RPD	Colour	2024/04/25	13		%	20
9354544	EMT	Matrix Spike	Orthophosphate (P)	2024/04/25		87	%	80 - 120
9354544	EMT	Spiked Blank	Orthophosphate (P)	2024/04/25		95	%	80 - 120
9354544	EMT	Method Blank	Orthophosphate (P)	2024/04/25	<0.010		mg/L	
9354544	EMT	RPD	Orthophosphate (P)	2024/04/25	4.3		%	20
9354545	EMT	Matrix Spike	Nitrate + Nitrite (N)	2024/04/25		96	%	80 - 120
9354545	EMT	Spiked Blank	Nitrate + Nitrite (N)	2024/04/25		102	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9354545	EMT	Method Blank	Nitrate + Nitrite (N)	2024/04/25	<0.050		mg/L	
9354545	EMT	RPD	Nitrate + Nitrite (N)	2024/04/25	3.6		%	20
9354546	EMT	Matrix Spike	Nitrite (N)	2024/04/25		103	%	80 - 120
9354546	EMT	Spiked Blank	Nitrite (N)	2024/04/25		108	%	80 - 120
9354546	EMT	Method Blank	Nitrite (N)	2024/04/25	<0.010		mg/L	
9354546	EMT	RPD	Nitrite (N)	2024/04/25	NC		%	20
9354579	MCN	Matrix Spike	Nitrogen (Ammonia Nitrogen)	2024/04/25		116	%	80 - 120
9354579	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2024/04/25		98	%	80 - 120
9354579	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2024/04/25	<0.050		mg/L	
9354579	MCN	RPD	Nitrogen (Ammonia Nitrogen)	2024/04/25	NC		%	20
9354584	LJV	Spiked Blank	pH	2024/04/25		100	%	97 - 103
9354584	LJV	RPD	pH	2024/04/25	0.27 (1)		%	N/A
9354586	LJV	Spiked Blank	Conductivity	2024/04/25		101	%	80 - 120
9354586	LJV	Method Blank	Conductivity	2024/04/25	<1.0		uS/cm	
9354586	LJV	RPD	Conductivity	2024/04/25	3.2		%	10
9354588	LJV	Spiked Blank	Total Alkalinity (Total as CaCO3)	2024/04/25		93	%	80 - 120
9354588	LJV	Method Blank	Total Alkalinity (Total as CaCO3)	2024/04/25	<2.0		mg/L	
9354588	LJV	RPD	Total Alkalinity (Total as CaCO3)	2024/04/25	3.4		%	20
9354592	LJV	Spiked Blank	pH	2024/04/25		100	%	97 - 103
9354592	LJV	RPD	pH	2024/04/25	0.98		%	N/A
9354596	LJV	Spiked Blank	Conductivity	2024/04/25		99	%	80 - 120
9354596	LJV	Method Blank	Conductivity	2024/04/25	<1.0		uS/cm	
9354596	LJV	RPD	Conductivity	2024/04/25	1.7		%	10
9354598	LJV	Spiked Blank	Total Alkalinity (Total as CaCO3)	2024/04/25		95	%	80 - 120
9354598	LJV	Method Blank	Total Alkalinity (Total as CaCO3)	2024/04/25	<2.0		mg/L	
9354598	LJV	RPD	Total Alkalinity (Total as CaCO3)	2024/04/25	1.0		%	20
9354628	LJV	QC Standard	Turbidity	2024/04/25		110	%	80 - 120
9354628	LJV	Spiked Blank	Turbidity	2024/04/25		108	%	80 - 120
9354628	LJV	Method Blank	Turbidity	2024/04/25	<0.10		NTU	
9354628	LJV	RPD	Turbidity	2024/04/25	2.1		%	20
9358191	SPY	Matrix Spike	Total Mercury (Hg)	2024/04/29		95	%	80 - 120
9358191	SPY	Spiked Blank	Total Mercury (Hg)	2024/04/29		97	%	80 - 120
9358191	SPY	Method Blank	Total Mercury (Hg)	2024/04/29	<0.013		ug/L	
9358191	SPY	RPD	Total Mercury (Hg)	2024/04/29	NC		%	20
9363388	SPY	Matrix Spike	Total Mercury (Hg)	2024/04/30		92	%	80 - 120
9363388	SPY	Spiked Blank	Total Mercury (Hg)	2024/04/30		101	%	80 - 120
9363388	SPY	Method Blank	Total Mercury (Hg)	2024/04/30	<0.013		ug/L	
9363388	SPY	RPD [YYW572-05]	Total Mercury (Hg)	2024/04/30	NC		%	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) pH: linear range exceedance. Extended linearity confirmed.

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Bureau Veritas Job #: C4B9973
Report Date: 2024/04/30

Dillon Consulting Limited
Client Project #: 22-3723
Site Location: LAKE ENON
Sampler Initials: JM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Janah Rhyno, Scientific Specialist

Bureau Veritas Proprietary Software
Logiciel Propriétaire de Bureau Veritas

Automated Statchk

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Your Project #: 22-3723-1003
Site#: LAKE ENON
Site Location: LAKE ENON

Attention: Nadine Wambolt

Dillon Consulting Limited
275 Charlotte St
Sydney, NS
CANADA B1P 1C6

Report Date: 2024/07/15
Report #: R8235217
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4K3628
Received: 2024/07/04, 16:00

Sample Matrix: Water
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Carbonate, Bicarbonate and Hydroxide (1)	5	N/A	2024/07/15	N/A	SM 24 4500-CO2 D
Alkalinity (1)	5	N/A	2024/07/12	ATL SOP 00142	SM 24 2320 B
Chloride (1)	5	N/A	2024/07/15	ATL SOP 00014	SM 24 4500-Cl- E m
Colour (1)	5	N/A	2024/07/15	ATL SOP 00020	SM 24 2120C m
Organic carbon - Diss (DOC) (as rec'd) (1, 2)	5	N/A	2024/07/10	ATL SOP 00203	SM 24 5310B m
Conductance - water (1)	5	N/A	2024/07/12	ATL SOP 00004	SM 24 2510B m
Hardness (calculated as CaCO3) (1)	5	N/A	2024/07/11	ATL SOP 00048	Auto Calc
Metals Water Total MS (1)	2	2024/07/10	2024/07/10	ATL SOP 00058	EPA 6020B R2 m
Metals Water Total MS (1)	3	2024/07/10	2024/07/11	ATL SOP 00058	EPA 6020B R2 m
Ion Balance (% Difference) (1)	5	N/A	2024/07/15	N/A	Auto Calc.
Anion and Cation Sum (1)	5	N/A	2024/07/15	N/A	Auto Calc.
Nitrogen Ammonia - water (1)	5	N/A	2024/07/11	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen - Nitrate + Nitrite (1)	5	N/A	2024/07/15	ATL SOP 00016	USGS I-2547-11m
Nitrogen - Nitrite (1)	5	N/A	2024/07/15	ATL SOP 00017	SM 24 4500-NO2- B m
Nitrogen - Nitrate (as N) (1)	5	N/A	2024/07/15	ATL SOP 00018	ASTM D3867-16
pH (1, 3)	5	N/A	2024/07/12	ATL SOP 00003	SM 24 4500-H+ B m
Phosphorus - ortho (1)	5	N/A	2024/07/15	ATL SOP 00021	SM 24 4500-P E m
Sat. pH and Langelier Index (@ 20C) (1)	5	N/A	2024/07/15	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C) (1)	5	N/A	2024/07/15	ATL SOP 00049	Auto Calc.
Reactive Silica (1)	5	N/A	2024/07/15	ATL SOP 00022	EPA 366.0 m
Sulphate (1)	5	N/A	2024/07/15	ATL SOP 00023	ASTM D516-16 m
Total Dissolved Solids (TDS calc) (1)	5	N/A	2024/07/15	N/A	Auto Calc.
Organic carbon - Total (TOC) (1, 4)	5	N/A	2024/07/10	ATL SOP 00203	SM 24 5310B m
Turbidity (1)	4	N/A	2024/07/12	ATL SOP 00011	EPA 180.1 R2 m
Turbidity (1)	1	N/A	2024/07/15	ATL SOP 00011	EPA 180.1 R2 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are

Your Project #: 22-3723-1003
Site#: LAKE ENON
Site Location: LAKE ENON

Attention: Nadine Wambolt

Dillon Consulting Limited
275 Charlotte St
Sydney, NS
CANADA B1P 1C6

Report Date: 2024/07/15
Report #: R8235217
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4K3628
Received: 2024/07/04, 16:00

reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Bedford, 200 Bluewater Rd Suite 105, Bedford, NS, B4B 1G9
(2) TOC / DOC present in the sample should be considered as non-purgeable TOC / DOC
(3) The APHA Standard Method requires pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the APHA Standard Method holding time.
(4) TOC / DOC present in the sample should be considered as non-purgeable TOC / DOC.

Encryption Key

Bureau Veritas
15 Jul 2024 16:49:40

Please direct all questions regarding this Certificate of Analysis to:
Natalie MacAskill, Key Account Specialist
Email: Natalie.MacAskill@bureauveritas.com
Phone# (902)567-1255 Ext:17
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Bureau Veritas Job #: C4K3628
Report Date: 2024/07/15

Dillon Consulting Limited
Client Project #: 22-3723-1003
Site Location: LAKE ENON
Sampler Initials: JM

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		ZQF323		ZQF341		ZQF342		ZQF343		
Sampling Date		2024/07/04		2024/07/04		2024/07/04		2024/07/04		
	UNITS	24-WL3-SW1	QC Batch	24-WL3-SW2	QC Batch	24-WL3-SW3	QC Batch	24-WL3-SW4	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	3.22	9494850	3.12	9494850	2.97	9494850	2.91	N/A	9494850
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	160	9494846	140	9494846	140	9494846	120	1.0	9494846
Calculated TDS	mg/L	160	9494857	160	9494857	160	9494857	160	1.0	9494857
Carb. Alkalinity (calc. as CaCO3)	mg/L	1.1	9494846	<1.0	9494846	<1.0	9494846	<1.0	1.0	9494846
Cation Sum	me/L	3.36	9494850	3.26	9494850	3.33	9494850	3.19	N/A	9494850
Hardness (CaCO3)	mg/L	160	9495558	160	9495558	160	9495558	150	1.0	9495558
Ion Balance (% Difference)	%	2.13	9494849	2.19	9494849	5.71	9494849	4.59	N/A	9494849
Langelier Index (@ 20C)	N/A	0.430	9494854	0.114	9494854	0.223	9494854	0.262		9494854
Langelier Index (@ 4C)	N/A	0.179	9494855	-0.136	9494855	-0.0280	9494855	0.0120		9494855
Nitrate (N)	mg/L	0.074	9494852	<0.050	9494852	<0.050	9494852	0.081	0.050	9494852
Saturation pH (@ 20C)	N/A	7.46	9494854	7.52	9494854	7.52	9494854	7.58		9494854
Saturation pH (@ 4C)	N/A	7.71	9494855	7.77	9494855	7.77	9494855	7.83		9494855
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	160	9510757	140	9510757	140	9510757	130	2.0	9510769
Dissolved Chloride (Cl-)	mg/L	1.7	9510745	2.4	9510679	2.1	9510679	2.5	1.0	9510679
Colour	TCU	19	9510758	46	9510688	47	9510688	31	5.0	9510688
Nitrate + Nitrite (N)	mg/L	0.074	9510761	<0.050	9510701	<0.050	9510701	0.081	0.050	9510701
Nitrite (N)	mg/L	<0.010	9510764	<0.010	9510702	<0.010	9510702	<0.010	0.010	9510702
Nitrogen (Ammonia Nitrogen)	mg/L	0.31	9507864	<0.050	9507864	<0.050	9507864	<0.050	0.050	9507864
Dissolved Organic Carbon (C)	mg/L	4.6	9502909	8.3	9502909	9.4	9502909	7.0	0.5	9502909
Total Organic Carbon (C)	mg/L	11	9505153	8.3	9505153	9.9	9505151	8.6	0.50	9505153
Orthophosphate (P)	mg/L	<0.010	9510759	<0.010	9510695	<0.010	9510695	<0.010	0.010	9510695
pH	pH	7.89	9510746	7.64	9510746	7.74	9510746	7.84		9510760
Reactive Silica (SiO2)	mg/L	1.2	9510756	2.3	9510686	2.4	9510686	1.8	0.50	9510686
Dissolved Sulphate (SO4)	mg/L	<2.0	9510753	13	9510683	6.2	9510683	15	2.0	9510683
Turbidity	NTU	3.3	9514232	1.3	9510488	1.8	9510488	8.8	0.10	9510488
Conductivity	uS/cm	340	9510754	330	9510754	310	9510754	300	1.0	9510768

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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Bureau Veritas Job #: C4K3628
Report Date: 2024/07/15

Dillon Consulting Limited
Client Project #: 22-3723-1003
Site Location: LAKE ENON
Sampler Initials: JM

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		ZQF344		
Sampling Date		2024/07/04		
	UNITS	24-WL3-DUPA	RDL	QC Batch
Calculated Parameters				
Anion Sum	me/L	3.13	N/A	9494850
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	150	1.0	9494846
Calculated TDS	mg/L	160	1.0	9494857
Carb. Alkalinity (calc. as CaCO3)	mg/L	1.5	1.0	9494846
Cation Sum	me/L	3.38	N/A	9494850
Hardness (CaCO3)	mg/L	160	1.0	9495558
Ion Balance (% Difference)	%	3.84	N/A	9494849
Langelier Index (@ 20C)	N/A	0.546		9494854
Langelier Index (@ 4C)	N/A	0.295		9494855
Nitrate (N)	mg/L	<0.050	0.050	9494852
Saturation pH (@ 20C)	N/A	7.47		9494854
Saturation pH (@ 4C)	N/A	7.72		9494855
Inorganics				
Total Alkalinity (Total as CaCO3)	mg/L	150	2.0	9510769
Dissolved Chloride (Cl-)	mg/L	2.3	1.0	9510679
Colour	TCU	16	5.0	9510688
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	9510701
Nitrite (N)	mg/L	<0.010	0.010	9510702
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	9507864
Dissolved Organic Carbon (C)	mg/L	4.6	0.5	9502909
Total Organic Carbon (C)	mg/L	4.6	0.50	9505153
Orthophosphate (P)	mg/L	<0.010	0.010	9510695
pH	pH	8.01		9510760
Reactive Silica (SiO2)	mg/L	1.4	0.50	9510686
Dissolved Sulphate (SO4)	mg/L	<2.0	2.0	9510683
Turbidity	NTU	2.3	0.10	9510488
Conductivity	uS/cm	340	1.0	9510768

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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Bureau Veritas Job #: C4K3628
Report Date: 2024/07/15

Dillon Consulting Limited
Client Project #: 22-3723-1003
Site Location: LAKE ENON
Sampler Initials: JM

ELEMENTS BY ICP/MS (WATER)

Bureau Veritas ID		ZQF323			ZQF341		ZQF342		ZQF343		
Sampling Date		2024/07/04			2024/07/04		2024/07/04		2024/07/04		
	UNITS	24-WL3-SW1	RDL	QC Batch	24-WL3-SW2	QC Batch	24-WL3-SW3	QC Batch	24-WL3-SW4	RDL	QC Batch
Metals											
Total Aluminum (Al)	ug/L	<5.0	5.0	9504902	<5.0	9504900	9.8	9504902	54	5.0	9504900
Total Antimony (Sb)	ug/L	<1.0	1.0	9504902	<1.0	9504900	<1.0	9504902	<1.0	1.0	9504900
Total Arsenic (As)	ug/L	<1.0	1.0	9504902	<1.0	9504900	<1.0	9504902	<1.0	1.0	9504900
Total Barium (Ba)	ug/L	370	1.0	9504902	440	9504900	630	9504902	400	1.0	9504900
Total Beryllium (Be)	ug/L	<0.10	0.10	9504902	<0.10	9504900	<0.10	9504902	<0.10	0.10	9504900
Total Bismuth (Bi)	ug/L	<2.0	2.0	9504902	<2.0	9504900	<2.0	9504902	<2.0	2.0	9504900
Total Boron (B)	ug/L	<50	50	9504902	<50	9504900	<50	9504902	<50	50	9504900
Total Cadmium (Cd)	ug/L	0.018	0.010	9504902	<0.010	9504900	0.011	9504902	0.040	0.010	9504900
Total Calcium (Ca)	ug/L	52000	100	9504902	51000	9504900	52000	9504902	50000	100	9504900
Total Chromium (Cr)	ug/L	<1.0	1.0	9504902	<1.0	9504900	<1.0	9504902	<1.0	1.0	9504900
Total Cobalt (Co)	ug/L	0.46	0.40	9504902	<0.40	9504900	<0.40	9504902	<0.40	0.40	9504900
Total Copper (Cu)	ug/L	<0.50	0.50	9504902	<0.50	9504900	<0.50	9504902	<0.50	0.50	9504900
Total Iron (Fe)	ug/L	400	50	9504902	140	9504900	1100	9504902	620	50	9504900
Total Lead (Pb)	ug/L	<0.50	0.50	9504902	1.7	9504900	3.6	9504902	8.0	0.50	9504900
Total Magnesium (Mg)	ug/L	7200	100	9504902	7300	9504900	7000	9504902	7000	100	9504900
Total Manganese (Mn)	ug/L	760	2.0	9504902	120	9504900	440	9504902	1600	2.0	9504900
Total Molybdenum (Mo)	ug/L	<2.0	2.0	9504902	<2.0	9504900	<2.0	9504902	<2.0	2.0	9504900
Total Nickel (Ni)	ug/L	2.1	2.0	9504902	<2.0	9504900	<2.0	9504902	<2.0	2.0	9504900
Total Phosphorus (P)	ug/L	<100	100	9504902	<100	9504900	<100	9504902	<100	100	9504900
Total Potassium (K)	ug/L	810	100	9504902	370	9504900	290	9504902	590	100	9504900
Total Selenium (Se)	ug/L	<0.50	0.50	9504902	<0.50	9504900	<0.50	9504902	<0.50	0.50	9504900
Total Silver (Ag)	ug/L	<0.10	0.10	9504902	<0.10	9504900	<0.10	9504902	<0.10	0.10	9504900
Total Sodium (Na)	ug/L	2300	100	9504902	2500	9504900	2800	9504902	2400	100	9504900
Total Strontium (Sr)	ug/L	5100	20	9504902	3600	9504900	1300	9504902	4300	2.0	9504900
Total Thallium (Tl)	ug/L	<0.10	0.10	9504902	<0.10	9504900	<0.10	9504902	<0.10	0.10	9504900
Total Tin (Sn)	ug/L	<2.0	2.0	9504902	<2.0	9504900	<2.0	9504902	<2.0	2.0	9504900
Total Titanium (Ti)	ug/L	<2.0	2.0	9504902	<2.0	9504900	<2.0	9504902	<2.0	2.0	9504900
Total Uranium (U)	ug/L	0.17	0.10	9504902	<0.10	9504900	<0.10	9504902	<0.10	0.10	9504900
Total Vanadium (V)	ug/L	<2.0	2.0	9504902	<2.0	9504900	<2.0	9504902	<2.0	2.0	9504900
Total Zinc (Zn)	ug/L	14	5.0	9504902	<5.0	9504900	<5.0	9504902	14	5.0	9504900

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ELEMENTS BY ICP/MS (WATER)

Bureau Veritas ID		ZQF344		
Sampling Date		2024/07/04		
	UNITS	24-WL3-DUPA	RDL	QC Batch
Metals				
Total Aluminum (Al)	ug/L	<5.0	5.0	9504902
Total Antimony (Sb)	ug/L	<1.0	1.0	9504902
Total Arsenic (As)	ug/L	<1.0	1.0	9504902
Total Barium (Ba)	ug/L	370	1.0	9504902
Total Beryllium (Be)	ug/L	<0.10	0.10	9504902
Total Bismuth (Bi)	ug/L	<2.0	2.0	9504902
Total Boron (B)	ug/L	<50	50	9504902
Total Cadmium (Cd)	ug/L	0.017	0.010	9504902
Total Calcium (Ca)	ug/L	53000	100	9504902
Total Chromium (Cr)	ug/L	<1.0	1.0	9504902
Total Cobalt (Co)	ug/L	0.51	0.40	9504902
Total Copper (Cu)	ug/L	<0.50	0.50	9504902
Total Iron (Fe)	ug/L	350	50	9504902
Total Lead (Pb)	ug/L	1.8	0.50	9504902
Total Magnesium (Mg)	ug/L	7300	100	9504902
Total Manganese (Mn)	ug/L	720	2.0	9504902
Total Molybdenum (Mo)	ug/L	<2.0	2.0	9504902
Total Nickel (Ni)	ug/L	2.1	2.0	9504902
Total Phosphorus (P)	ug/L	<100	100	9504902
Total Potassium (K)	ug/L	820	100	9504902
Total Selenium (Se)	ug/L	<0.50	0.50	9504902
Total Silver (Ag)	ug/L	<0.10	0.10	9504902
Total Sodium (Na)	ug/L	2400	100	9504902
Total Strontium (Sr)	ug/L	5000	20	9504902
Total Thallium (Tl)	ug/L	<0.10	0.10	9504902
Total Tin (Sn)	ug/L	<2.0	2.0	9504902
Total Titanium (Ti)	ug/L	<2.0	2.0	9504902
Total Uranium (U)	ug/L	0.18	0.10	9504902
Total Vanadium (V)	ug/L	<2.0	2.0	9504902
Total Zinc (Zn)	ug/L	13	5.0	9504902

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GENERAL COMMENTS

Sample ZQF342 [24-WL3-SW3] : Poor RCAp Ion Balance due to sample matrix.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9502909	MKY	Matrix Spike	Dissolved Organic Carbon (C)	2024/07/10		102	%	85 - 115
9502909	MKY	Spiked Blank	Dissolved Organic Carbon (C)	2024/07/10		100	%	80 - 120
9502909	MKY	Method Blank	Dissolved Organic Carbon (C)	2024/07/10	<0.5		mg/L	
9502909	MKY	RPD	Dissolved Organic Carbon (C)	2024/07/10	0.70		%	15
9504900	MOA	Matrix Spike [ZQF343-02]	Total Aluminum (Al)	2024/07/10		98	%	80 - 120
			Total Antimony (Sb)	2024/07/10		103	%	80 - 120
			Total Arsenic (As)	2024/07/10		99	%	80 - 120
			Total Barium (Ba)	2024/07/10		NC	%	80 - 120
			Total Beryllium (Be)	2024/07/10		100	%	80 - 120
			Total Bismuth (Bi)	2024/07/10		97	%	80 - 120
			Total Boron (B)	2024/07/10		99	%	80 - 120
			Total Cadmium (Cd)	2024/07/10		95	%	80 - 120
			Total Calcium (Ca)	2024/07/10		NC	%	80 - 120
			Total Chromium (Cr)	2024/07/10		100	%	80 - 120
			Total Cobalt (Co)	2024/07/10		99	%	80 - 120
			Total Copper (Cu)	2024/07/10		96	%	80 - 120
			Total Iron (Fe)	2024/07/10		95	%	80 - 120
			Total Lead (Pb)	2024/07/10		96	%	80 - 120
			Total Magnesium (Mg)	2024/07/10		106	%	80 - 120
			Total Manganese (Mn)	2024/07/10		NC	%	80 - 120
			Total Molybdenum (Mo)	2024/07/10		103	%	80 - 120
			Total Nickel (Ni)	2024/07/10		100	%	80 - 120
			Total Phosphorus (P)	2024/07/10		102	%	80 - 120
			Total Potassium (K)	2024/07/10		99	%	80 - 120
			Total Selenium (Se)	2024/07/10		100	%	80 - 120
			Total Silver (Ag)	2024/07/10		98	%	80 - 120
			Total Sodium (Na)	2024/07/10		103	%	80 - 120
			Total Strontium (Sr)	2024/07/10		NC	%	80 - 120
			Total Thallium (Tl)	2024/07/10		99	%	80 - 120
			Total Tin (Sn)	2024/07/10		100	%	80 - 120
			Total Titanium (Ti)	2024/07/10		100	%	80 - 120
			Total Uranium (U)	2024/07/10		103	%	80 - 120
			Total Vanadium (V)	2024/07/10		102	%	80 - 120
			Total Zinc (Zn)	2024/07/10		98	%	80 - 120
9504900	MOA	Spiked Blank	Total Aluminum (Al)	2024/07/10		97	%	80 - 120
			Total Antimony (Sb)	2024/07/10		103	%	80 - 120
			Total Arsenic (As)	2024/07/10		97	%	80 - 120
			Total Barium (Ba)	2024/07/10		93	%	80 - 120
			Total Beryllium (Be)	2024/07/10		99	%	80 - 120
			Total Bismuth (Bi)	2024/07/10		98	%	80 - 120
			Total Boron (B)	2024/07/10		103	%	80 - 120
			Total Cadmium (Cd)	2024/07/10		96	%	80 - 120
			Total Calcium (Ca)	2024/07/10		101	%	80 - 120
			Total Chromium (Cr)	2024/07/10		100	%	80 - 120
			Total Cobalt (Co)	2024/07/10		98	%	80 - 120
			Total Copper (Cu)	2024/07/10		96	%	80 - 120
			Total Iron (Fe)	2024/07/10		101	%	80 - 120
			Total Lead (Pb)	2024/07/10		97	%	80 - 120
			Total Magnesium (Mg)	2024/07/10		105	%	80 - 120
			Total Manganese (Mn)	2024/07/10		99	%	80 - 120
			Total Molybdenum (Mo)	2024/07/10		102	%	80 - 120
			Total Nickel (Ni)	2024/07/10		99	%	80 - 120
			Total Phosphorus (P)	2024/07/10		102	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Potassium (K)	2024/07/10		100	%	80 - 120
			Total Selenium (Se)	2024/07/10		97	%	80 - 120
			Total Silver (Ag)	2024/07/10		96	%	80 - 120
			Total Sodium (Na)	2024/07/10		102	%	80 - 120
			Total Strontium (Sr)	2024/07/10		97	%	80 - 120
			Total Thallium (Tl)	2024/07/10		100	%	80 - 120
			Total Tin (Sn)	2024/07/10		98	%	80 - 120
			Total Titanium (Ti)	2024/07/10		98	%	80 - 120
			Total Uranium (U)	2024/07/10		103	%	80 - 120
			Total Vanadium (V)	2024/07/10		101	%	80 - 120
			Total Zinc (Zn)	2024/07/10		99	%	80 - 120
9504900	MOA	Method Blank	Total Aluminum (Al)	2024/07/10	<5.0		ug/L	
			Total Antimony (Sb)	2024/07/10	<1.0		ug/L	
			Total Arsenic (As)	2024/07/10	<1.0		ug/L	
			Total Barium (Ba)	2024/07/10	<1.0		ug/L	
			Total Beryllium (Be)	2024/07/10	<0.10		ug/L	
			Total Bismuth (Bi)	2024/07/10	<2.0		ug/L	
			Total Boron (B)	2024/07/10	<50		ug/L	
			Total Cadmium (Cd)	2024/07/10	<0.010		ug/L	
			Total Calcium (Ca)	2024/07/10	<100		ug/L	
			Total Chromium (Cr)	2024/07/10	<1.0		ug/L	
			Total Cobalt (Co)	2024/07/10	<0.40		ug/L	
			Total Copper (Cu)	2024/07/10	<0.50		ug/L	
			Total Iron (Fe)	2024/07/10	<50		ug/L	
			Total Lead (Pb)	2024/07/10	<0.50		ug/L	
			Total Magnesium (Mg)	2024/07/10	<100		ug/L	
			Total Manganese (Mn)	2024/07/10	<2.0		ug/L	
			Total Molybdenum (Mo)	2024/07/10	<2.0		ug/L	
			Total Nickel (Ni)	2024/07/10	<2.0		ug/L	
			Total Phosphorus (P)	2024/07/10	<100		ug/L	
			Total Potassium (K)	2024/07/10	<100		ug/L	
			Total Selenium (Se)	2024/07/10	<0.50		ug/L	
			Total Silver (Ag)	2024/07/10	<0.10		ug/L	
			Total Sodium (Na)	2024/07/10	<100		ug/L	
			Total Strontium (Sr)	2024/07/10	<2.0		ug/L	
			Total Thallium (Tl)	2024/07/10	<0.10		ug/L	
			Total Tin (Sn)	2024/07/10	<2.0		ug/L	
			Total Titanium (Ti)	2024/07/10	<2.0		ug/L	
			Total Uranium (U)	2024/07/10	<0.10		ug/L	
			Total Vanadium (V)	2024/07/10	<2.0		ug/L	
			Total Zinc (Zn)	2024/07/10	<5.0		ug/L	
9504900	MOA	RPD [ZQF341-02]	Total Aluminum (Al)	2024/07/10	NC		%	20
			Total Antimony (Sb)	2024/07/10	NC		%	20
			Total Arsenic (As)	2024/07/10	NC		%	20
			Total Barium (Ba)	2024/07/10	1.3		%	20
			Total Beryllium (Be)	2024/07/10	NC		%	20
			Total Bismuth (Bi)	2024/07/10	NC		%	20
			Total Boron (B)	2024/07/10	NC		%	20
			Total Cadmium (Cd)	2024/07/10	NC		%	20
			Total Calcium (Ca)	2024/07/10	1.9		%	20
			Total Chromium (Cr)	2024/07/10	NC		%	20
			Total Cobalt (Co)	2024/07/10	NC		%	20
			Total Copper (Cu)	2024/07/10	NC		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Iron (Fe)	2024/07/10	1.4		%	20
			Total Lead (Pb)	2024/07/10	2.9		%	20
			Total Magnesium (Mg)	2024/07/10	2.1		%	20
			Total Manganese (Mn)	2024/07/10	0.81		%	20
			Total Molybdenum (Mo)	2024/07/10	NC		%	20
			Total Nickel (Ni)	2024/07/10	NC		%	20
			Total Phosphorus (P)	2024/07/10	NC		%	20
			Total Potassium (K)	2024/07/10	1.2		%	20
			Total Selenium (Se)	2024/07/10	NC		%	20
			Total Silver (Ag)	2024/07/10	NC		%	20
			Total Sodium (Na)	2024/07/10	2.3		%	20
			Total Strontium (Sr)	2024/07/10	0.75		%	20
			Total Thallium (Tl)	2024/07/10	NC		%	20
			Total Tin (Sn)	2024/07/10	NC		%	20
			Total Titanium (Ti)	2024/07/10	NC		%	20
			Total Uranium (U)	2024/07/10	NC		%	20
			Total Vanadium (V)	2024/07/10	NC		%	20
			Total Zinc (Zn)	2024/07/10	NC		%	20
9504902	MOA	Matrix Spike [ZQF342-02]	Total Aluminum (Al)	2024/07/11		103	%	80 - 120
			Total Antimony (Sb)	2024/07/11		106	%	80 - 120
			Total Arsenic (As)	2024/07/11		102	%	80 - 120
			Total Barium (Ba)	2024/07/11		NC	%	80 - 120
			Total Beryllium (Be)	2024/07/11		98	%	80 - 120
			Total Bismuth (Bi)	2024/07/11		98	%	80 - 120
			Total Boron (B)	2024/07/11		96	%	80 - 120
			Total Cadmium (Cd)	2024/07/11		101	%	80 - 120
			Total Calcium (Ca)	2024/07/11		NC	%	80 - 120
			Total Chromium (Cr)	2024/07/11		99	%	80 - 120
			Total Cobalt (Co)	2024/07/11		98	%	80 - 120
			Total Copper (Cu)	2024/07/11		97	%	80 - 120
			Total Iron (Fe)	2024/07/11		NC	%	80 - 120
			Total Lead (Pb)	2024/07/11		97	%	80 - 120
			Total Magnesium (Mg)	2024/07/11		109	%	80 - 120
			Total Manganese (Mn)	2024/07/11		NC	%	80 - 120
			Total Molybdenum (Mo)	2024/07/11		107	%	80 - 120
			Total Nickel (Ni)	2024/07/11		99	%	80 - 120
			Total Phosphorus (P)	2024/07/11		108	%	80 - 120
			Total Potassium (K)	2024/07/11		103	%	80 - 120
			Total Selenium (Se)	2024/07/11		100	%	80 - 120
			Total Silver (Ag)	2024/07/11		100	%	80 - 120
			Total Sodium (Na)	2024/07/11		103	%	80 - 120
			Total Strontium (Sr)	2024/07/11		NC	%	80 - 120
			Total Thallium (Tl)	2024/07/11		100	%	80 - 120
			Total Tin (Sn)	2024/07/11		103	%	80 - 120
			Total Titanium (Ti)	2024/07/11		101	%	80 - 120
			Total Uranium (U)	2024/07/11		105	%	80 - 120
			Total Vanadium (V)	2024/07/11		101	%	80 - 120
			Total Zinc (Zn)	2024/07/11		100	%	80 - 120
9504902	MOA	Spiked Blank	Total Aluminum (Al)	2024/07/10		101	%	80 - 120
			Total Antimony (Sb)	2024/07/10		103	%	80 - 120
			Total Arsenic (As)	2024/07/10		98	%	80 - 120
			Total Barium (Ba)	2024/07/10		96	%	80 - 120
			Total Beryllium (Be)	2024/07/10		89	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Bismuth (Bi)	2024/07/10		97	%	80 - 120
			Total Boron (B)	2024/07/10		89	%	80 - 120
			Total Cadmium (Cd)	2024/07/10		98	%	80 - 120
			Total Calcium (Ca)	2024/07/10		99	%	80 - 120
			Total Chromium (Cr)	2024/07/10		96	%	80 - 120
			Total Cobalt (Co)	2024/07/10		96	%	80 - 120
			Total Copper (Cu)	2024/07/10		96	%	80 - 120
			Total Iron (Fe)	2024/07/10		103	%	80 - 120
			Total Lead (Pb)	2024/07/10		96	%	80 - 120
			Total Magnesium (Mg)	2024/07/10		104	%	80 - 120
			Total Manganese (Mn)	2024/07/10		97	%	80 - 120
			Total Molybdenum (Mo)	2024/07/10		102	%	80 - 120
			Total Nickel (Ni)	2024/07/10		97	%	80 - 120
			Total Phosphorus (P)	2024/07/10		102	%	80 - 120
			Total Potassium (K)	2024/07/10		99	%	80 - 120
			Total Selenium (Se)	2024/07/10		94	%	80 - 120
			Total Silver (Ag)	2024/07/10		97	%	80 - 120
			Total Sodium (Na)	2024/07/10		100	%	80 - 120
			Total Strontium (Sr)	2024/07/10		99	%	80 - 120
			Total Thallium (Tl)	2024/07/10		97	%	80 - 120
			Total Tin (Sn)	2024/07/10		99	%	80 - 120
			Total Titanium (Ti)	2024/07/10		101	%	80 - 120
			Total Uranium (U)	2024/07/10		103	%	80 - 120
			Total Vanadium (V)	2024/07/10		99	%	80 - 120
			Total Zinc (Zn)	2024/07/10		98	%	80 - 120
9504902	MOA	Method Blank	Total Aluminum (Al)	2024/07/10	<5.0		ug/L	
			Total Antimony (Sb)	2024/07/10	<1.0		ug/L	
			Total Arsenic (As)	2024/07/10	<1.0		ug/L	
			Total Barium (Ba)	2024/07/10	<1.0		ug/L	
			Total Beryllium (Be)	2024/07/10	<0.10		ug/L	
			Total Bismuth (Bi)	2024/07/10	<2.0		ug/L	
			Total Boron (B)	2024/07/10	<50		ug/L	
			Total Cadmium (Cd)	2024/07/10	<0.010		ug/L	
			Total Calcium (Ca)	2024/07/10	<100		ug/L	
			Total Chromium (Cr)	2024/07/10	<1.0		ug/L	
			Total Cobalt (Co)	2024/07/10	<0.40		ug/L	
			Total Copper (Cu)	2024/07/10	<0.50		ug/L	
			Total Iron (Fe)	2024/07/10	<50		ug/L	
			Total Lead (Pb)	2024/07/10	<0.50		ug/L	
			Total Magnesium (Mg)	2024/07/10	<100		ug/L	
			Total Manganese (Mn)	2024/07/10	<2.0		ug/L	
			Total Molybdenum (Mo)	2024/07/10	<2.0		ug/L	
			Total Nickel (Ni)	2024/07/10	<2.0		ug/L	
			Total Phosphorus (P)	2024/07/10	<100		ug/L	
			Total Potassium (K)	2024/07/10	<100		ug/L	
			Total Selenium (Se)	2024/07/10	<0.50		ug/L	
			Total Silver (Ag)	2024/07/10	<0.10		ug/L	
			Total Sodium (Na)	2024/07/10	<100		ug/L	
			Total Strontium (Sr)	2024/07/10	<2.0		ug/L	
			Total Thallium (Tl)	2024/07/10	<0.10		ug/L	
			Total Tin (Sn)	2024/07/10	<2.0		ug/L	
			Total Titanium (Ti)	2024/07/10	<2.0		ug/L	
			Total Uranium (U)	2024/07/10	<0.10		ug/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Vanadium (V)	2024/07/10	<2.0		ug/L	
			Total Zinc (Zn)	2024/07/10	<5.0		ug/L	
9504902	MOA	RPD [ZQF323-02]	Total Aluminum (Al)	2024/07/11	NC		%	20
			Total Antimony (Sb)	2024/07/11	NC		%	20
			Total Arsenic (As)	2024/07/11	NC		%	20
			Total Barium (Ba)	2024/07/11	0.60		%	20
			Total Beryllium (Be)	2024/07/11	NC		%	20
			Total Bismuth (Bi)	2024/07/11	NC		%	20
			Total Boron (B)	2024/07/11	NC		%	20
			Total Cadmium (Cd)	2024/07/11	16		%	20
			Total Calcium (Ca)	2024/07/11	1.4		%	20
			Total Chromium (Cr)	2024/07/11	NC		%	20
			Total Cobalt (Co)	2024/07/11	9.3		%	20
			Total Copper (Cu)	2024/07/11	NC		%	20
			Total Iron (Fe)	2024/07/11	0.57		%	20
			Total Lead (Pb)	2024/07/11	NC		%	20
			Total Magnesium (Mg)	2024/07/11	0.21		%	20
			Total Manganese (Mn)	2024/07/11	0.66		%	20
			Total Molybdenum (Mo)	2024/07/11	NC		%	20
			Total Nickel (Ni)	2024/07/11	4.7		%	20
			Total Phosphorus (P)	2024/07/11	NC		%	20
			Total Potassium (K)	2024/07/11	0.46		%	20
			Total Selenium (Se)	2024/07/11	NC		%	20
			Total Silver (Ag)	2024/07/11	NC		%	20
			Total Sodium (Na)	2024/07/11	0.51		%	20
			Total Strontium (Sr)	2024/07/11	1.4		%	20
			Total Thallium (Tl)	2024/07/11	NC		%	20
			Total Tin (Sn)	2024/07/11	NC		%	20
			Total Titanium (Ti)	2024/07/11	NC		%	20
			Total Uranium (U)	2024/07/11	7.0		%	20
			Total Vanadium (V)	2024/07/11	NC		%	20
			Total Zinc (Zn)	2024/07/11	0.75		%	20
9505151	MKY	Matrix Spike	Total Organic Carbon (C)	2024/07/10		99	%	85 - 115
9505151	MKY	Spiked Blank	Total Organic Carbon (C)	2024/07/10		102	%	80 - 120
9505151	MKY	Method Blank	Total Organic Carbon (C)	2024/07/10	<0.50		mg/L	
9505151	MKY	RPD	Total Organic Carbon (C)	2024/07/10	NC		%	15
9505153	MKY	Matrix Spike [ZQF341-04]	Total Organic Carbon (C)	2024/07/10		100	%	85 - 115
9505153	MKY	Spiked Blank	Total Organic Carbon (C)	2024/07/10		101	%	80 - 120
9505153	MKY	Method Blank	Total Organic Carbon (C)	2024/07/10	<0.50		mg/L	
9505153	MKY	RPD [ZQF341-04]	Total Organic Carbon (C)	2024/07/10	0.36		%	15
9507864	MCN	Matrix Spike	Nitrogen (Ammonia Nitrogen)	2024/07/11		94	%	80 - 120
9507864	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2024/07/11		92	%	80 - 120
9507864	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2024/07/11	<0.050		mg/L	
9507864	MCN	RPD	Nitrogen (Ammonia Nitrogen)	2024/07/11	NC		%	20
9510488	KMC	QC Standard	Turbidity	2024/07/12		111	%	80 - 120
9510488	KMC	Spiked Blank	Turbidity	2024/07/12		102	%	80 - 120
9510488	KMC	Method Blank	Turbidity	2024/07/12	<0.10		NTU	
9510488	KMC	RPD	Turbidity	2024/07/12	14		%	20
9510679	EMT	Matrix Spike	Dissolved Chloride (Cl-)	2024/07/15		96	%	80 - 120
9510679	EMT	Spiked Blank	Dissolved Chloride (Cl-)	2024/07/15		96	%	80 - 120
9510679	EMT	Method Blank	Dissolved Chloride (Cl-)	2024/07/15	<1.0		mg/L	
9510679	EMT	RPD	Dissolved Chloride (Cl-)	2024/07/15	1.0		%	20
9510683	EMT	Matrix Spike	Dissolved Sulphate (SO4)	2024/07/15		102	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9510683	EMT	Spiked Blank	Dissolved Sulphate (SO4)	2024/07/15		99	%	80 - 120
9510683	EMT	Method Blank	Dissolved Sulphate (SO4)	2024/07/15	<2.0		mg/L	
9510683	EMT	RPD	Dissolved Sulphate (SO4)	2024/07/15	12		%	20
9510686	EMT	Matrix Spike	Reactive Silica (SiO2)	2024/07/15		NC	%	80 - 120
9510686	EMT	Spiked Blank	Reactive Silica (SiO2)	2024/07/15		91	%	80 - 120
9510686	EMT	Method Blank	Reactive Silica (SiO2)	2024/07/15	<0.50		mg/L	
9510686	EMT	RPD	Reactive Silica (SiO2)	2024/07/15	0.0051		%	20
9510688	EMT	Spiked Blank	Colour	2024/07/15		103	%	80 - 120
9510688	EMT	Method Blank	Colour	2024/07/15	<5.0		TCU	
9510688	EMT	RPD	Colour	2024/07/15	1.2		%	20
9510695	EMT	Matrix Spike	Orthophosphate (P)	2024/07/15		99	%	80 - 120
9510695	EMT	Spiked Blank	Orthophosphate (P)	2024/07/15		101	%	80 - 120
9510695	EMT	Method Blank	Orthophosphate (P)	2024/07/15	<0.010		mg/L	
9510695	EMT	RPD	Orthophosphate (P)	2024/07/15	5.1		%	20
9510701	EMT	Matrix Spike	Nitrate + Nitrite (N)	2024/07/15		98	%	80 - 120
9510701	EMT	Spiked Blank	Nitrate + Nitrite (N)	2024/07/15		105	%	80 - 120
9510701	EMT	Method Blank	Nitrate + Nitrite (N)	2024/07/15	<0.050		mg/L	
9510701	EMT	RPD	Nitrate + Nitrite (N)	2024/07/15	6.5		%	20
9510702	MCN	Matrix Spike	Nitrite (N)	2024/07/15		103	%	80 - 120
9510702	MCN	Spiked Blank	Nitrite (N)	2024/07/15		107	%	80 - 120
9510702	MCN	Method Blank	Nitrite (N)	2024/07/15	<0.010		mg/L	
9510702	MCN	RPD	Nitrite (N)	2024/07/15	NC		%	20
9510745	EMT	Matrix Spike	Dissolved Chloride (Cl-)	2024/07/15		NC	%	80 - 120
9510745	EMT	Spiked Blank	Dissolved Chloride (Cl-)	2024/07/15		95	%	80 - 120
9510745	EMT	Method Blank	Dissolved Chloride (Cl-)	2024/07/15	<1.0		mg/L	
9510745	EMT	RPD	Dissolved Chloride (Cl-)	2024/07/15	0.29		%	20
9510746	M2C	Spiked Blank	pH	2024/07/12		99	%	97 - 103
9510746	M2C	RPD	pH	2024/07/12	0.47		%	N/A
9510753	EMT	Matrix Spike	Dissolved Sulphate (SO4)	2024/07/15		NC	%	80 - 120
9510753	EMT	Spiked Blank	Dissolved Sulphate (SO4)	2024/07/15		97	%	80 - 120
9510753	EMT	Method Blank	Dissolved Sulphate (SO4)	2024/07/15	<2.0		mg/L	
9510753	EMT	RPD	Dissolved Sulphate (SO4)	2024/07/15	0.12		%	20
9510754	M2C	Spiked Blank	Conductivity	2024/07/12		94	%	80 - 120
9510754	M2C	Method Blank	Conductivity	2024/07/12	<1.0		uS/cm	
9510754	M2C	RPD	Conductivity	2024/07/12	0.053		%	10
9510756	EMT	Matrix Spike	Reactive Silica (SiO2)	2024/07/15		82	%	80 - 120
9510756	EMT	Spiked Blank	Reactive Silica (SiO2)	2024/07/15		91	%	80 - 120
9510756	EMT	Method Blank	Reactive Silica (SiO2)	2024/07/15	<0.50		mg/L	
9510756	EMT	RPD	Reactive Silica (SiO2)	2024/07/15	1.4		%	20
9510757	M2C	Spiked Blank	Total Alkalinity (Total as CaCO3)	2024/07/12		91	%	80 - 120
9510757	M2C	Method Blank	Total Alkalinity (Total as CaCO3)	2024/07/12	<2.0		mg/L	
9510757	M2C	RPD	Total Alkalinity (Total as CaCO3)	2024/07/12	NC		%	20
9510758	EMT	Spiked Blank	Colour	2024/07/15		94	%	80 - 120
9510758	EMT	Method Blank	Colour	2024/07/15	<5.0		TCU	
9510758	EMT	RPD	Colour	2024/07/15	NC		%	20
9510759	EMT	Matrix Spike	Orthophosphate (P)	2024/07/15		87	%	80 - 120
9510759	EMT	Spiked Blank	Orthophosphate (P)	2024/07/15		98	%	80 - 120
9510759	EMT	Method Blank	Orthophosphate (P)	2024/07/15	<0.010		mg/L	
9510759	EMT	RPD	Orthophosphate (P)	2024/07/15	NC		%	20
9510760	M2C	Spiked Blank	pH	2024/07/12		99	%	97 - 103
9510760	M2C	RPD [ZQF343-01]	pH	2024/07/12	0.13		%	N/A
9510761	EMT	Matrix Spike	Nitrate + Nitrite (N)	2024/07/15		92	%	80 - 120
9510761	EMT	Spiked Blank	Nitrate + Nitrite (N)	2024/07/15		102	%	80 - 120

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Bureau Veritas Job #: C4K3628
Report Date: 2024/07/15

Dillon Consulting Limited
Client Project #: 22-3723-1003
Site Location: LAKE ENON
Sampler Initials: JM

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9510761	EMT	Method Blank	Nitrate + Nitrite (N)	2024/07/15	<0.050		mg/L	
9510761	EMT	RPD	Nitrate + Nitrite (N)	2024/07/15	1.2		%	20
9510764	MCN	Matrix Spike	Nitrite (N)	2024/07/15		106	%	80 - 120
9510764	MCN	Spiked Blank	Nitrite (N)	2024/07/15		106	%	80 - 120
9510764	MCN	Method Blank	Nitrite (N)	2024/07/15	<0.010		mg/L	
9510764	MCN	RPD	Nitrite (N)	2024/07/15	2.1		%	20
9510768	M2C	Spiked Blank	Conductivity	2024/07/12		94	%	80 - 120
9510768	M2C	Method Blank	Conductivity	2024/07/12	<1.0		uS/cm	
9510768	M2C	RPD [ZQF343-01]	Conductivity	2024/07/12	2.4		%	10
9510769	M2C	Spiked Blank	Total Alkalinity (Total as CaCO3)	2024/07/12		92	%	80 - 120
9510769	M2C	Method Blank	Total Alkalinity (Total as CaCO3)	2024/07/12	<2.0		mg/L	
9510769	M2C	RPD [ZQF343-01]	Total Alkalinity (Total as CaCO3)	2024/07/12	0.74		%	20
9514232	LJV	QC Standard	Turbidity	2024/07/15		111	%	80 - 120
9514232	LJV	Spiked Blank	Turbidity	2024/07/15		101	%	80 - 120
9514232	LJV	Method Blank	Turbidity	2024/07/15	<0.10		NTU	
9514232	LJV	RPD	Turbidity	2024/07/15	0.32		%	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

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Bureau Veritas Job #: C4K3628
Report Date: 2024/07/15

Dillon Consulting Limited
Client Project #: 22-3723-1003
Site Location: LAKE ENON
Sampler Initials: JM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Colleen Acker, B.Sc, Scientific Service Specialist

Bureau Veritas Proprietary Software
Logiciel Propriétaire de Bureau Veritas

Automated Statchk

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Kathy Martin, Laboratory Manager responsible for Nova Scotia Environmental laboratory operations.

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Your Project #: 223723
Site Location: LAKE ENON (VEGETATION)

Attention: Nadine Wambolt

Dillon Consulting Limited
275 Charlotte St
Sydney, NS
CANADA B1P 1C6

Report Date: 2024/06/26
Report #: R8209538
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4G5584
Received: 2024/06/03, 14:30

Sample Matrix: Solid
Samples Received: 12

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Mercury in biota (1)	12	2024/06/24	2024/06/26	ATL SOP 00026	EPA 245.6 R2.3 m
Metals in Terrestrial Biota (1)	12	2024/06/24	2024/06/24	ATL SOP 00058	EPA 6020B R3 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Bedford, 200 Bluewater Rd Suite 105, Bedford, NS, B4B 1G9

Bureau Veritas 465 George St., Unit G, Sydney, NS, B1P 1K5 Tel:902 567 1255 Toll Free: 888 535 7770 Fax: 902 539 6504 www.bvna.com

Your Project #: 223723
Site Location: LAKE ENON (VEGETATION)

Attention: Nadine Wambolt

Dillon Consulting Limited
275 Charlotte St
Sydney, NS
CANADA B1P 1C6

Report Date: 2024/06/26
Report #: R8209538
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4G5584
Received: 2024/06/03, 14:30

Encryption Key

Bureau Veritas
26 Jun 2024 16:54:35

Please direct all questions regarding this Certificate of Analysis to:
Natalie MacAskill, Key Account Specialist
Email: Natalie.MacAskill@bureauveritas.com
Phone# (902)567-1255 Ext:17

==========

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Bureau Veritas Job #: C4G5584
Report Date: 2024/06/26

Dillon Consulting Limited
Client Project #: 223723
Site Location: LAKE ENON (VEGETATION)
Sampler Initials: JM

MERCURY BY COLD VAPOUR AA (SOLID)

Bureau Veritas ID		ZIJ613	ZIJ638	ZIJ639	ZIJ640	ZIJ641	ZIJ642	ZIJ643		
Sampling Date		2024/05/28	2024/05/30	2024/05/30	2024/05/30	2024/05/30	2024/05/30	2024/05/30		
	UNITS	24-AV-01	24-AV-02	24-AV-03	24-AV-04	24-AV-05	24-AV-06	24-AV-07	RDL	QC Batch
Metals										
Mercury (Hg)	mg/kg	0.013	0.021	0.018	0.019	0.057	<0.010	0.013	0.010	9474381

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		ZIJ644	ZIJ645	ZIJ646	ZIJ647	ZIJ648		
Sampling Date		2024/05/30	2024/05/30	2024/05/30	2024/05/30	2024/05/30		
	UNITS	24-AV-08	24-AV-09	24-AV-10	24-AV-11	24-AV-12	RDL	QC Batch
Metals								
Mercury (Hg)	mg/kg	0.033	0.038	<0.010	<0.010	<0.010	0.010	9474381

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C4G5584
Report Date: 2024/06/26

Dillon Consulting Limited
Client Project #: 223723
Site Location: LAKE ENON (VEGETATION)
Sampler Initials: JM

ELEMENTS BY ATOMIC SPECTROSCOPY (SOLID)

Bureau Veritas ID		ZIJ613	ZIJ638	ZIJ639	ZIJ640	ZIJ641	ZIJ642		
Sampling Date		2024/05/28	2024/05/30	2024/05/30	2024/05/30	2024/05/30	2024/05/30		
	UNITS	24-AV-01	24-AV-02	24-AV-03	24-AV-04	24-AV-05	24-AV-06	RDL	QC Batch
Metals									
Acid Extractable Aluminum (Al)	mg/kg	980	2500	2500	2700	7500	1400	10	9474082
Acid Extractable Antimony (Sb)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	9474082
Acid Extractable Arsenic (As)	mg/kg	<2.0	<2.0	<2.0	2.2	4.9	<2.0	2.0	9474082
Acid Extractable Barium (Ba)	mg/kg	200	350	470	620	1000	310	5.0	9474082
Acid Extractable Beryllium (Be)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	9474082
Acid Extractable Boron (B)	mg/kg	30	27	28	21	14	26	5.0	9474082
Acid Extractable Cadmium (Cd)	mg/kg	2.2	2.3	2.5	2.3	5.5	2.7	0.30	9474082
Acid Extractable Chromium (Cr)	mg/kg	<2.0	3.0	2.9	3.8	7.6	2.4	2.0	9474082
Acid Extractable Cobalt (Co)	mg/kg	<1.0	1.5	1.5	2.2	4.5	1.0	1.0	9474082
Acid Extractable Copper (Cu)	mg/kg	5.6	6.8	7.8	14	16	7.1	2.0	9474082
Acid Extractable Iron (Fe)	mg/kg	1400	3500	3700	4700	10000	2200	50	9474082
Acid Extractable Lead (Pb)	mg/kg	17	43	44	48	150	42	0.50	9474082
Acid Extractable Lithium (Li)	mg/kg	<2.0	2.9	2.2	3.2	9.9	<2.0	2.0	9474082
Acid Extractable Manganese (Mn)	mg/kg	1500	3200	3900	5200	13000	1600	2.0	9474082
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	<2.0	<2.0	<2.0	2.7	<2.0	2.0	9474082
Acid Extractable Nickel (Ni)	mg/kg	<2.0	5.0	3.1	4.2	8.8	2.5	2.0	9474082
Acid Extractable Selenium (Se)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	9474082
Acid Extractable Silver (Ag)	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	9474082
Acid Extractable Strontium (Sr)	mg/kg	1500	1500	1500	940	1500	1500	5.0	9474082
Acid Extractable Thallium (Tl)	mg/kg	<0.10	<0.10	0.12	0.11	0.17	0.13	0.10	9474082
Acid Extractable Uranium (U)	mg/kg	0.39	0.63	0.78	0.79	2.7	0.59	0.10	9474082
Acid Extractable Vanadium (V)	mg/kg	2.6	5.1	4.9	6.5	15	3.1	2.0	9474082
Acid Extractable Zinc (Zn)	mg/kg	190	260	270	220	390	290	5.0	9474082

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C4G5584
Report Date: 2024/06/26

Dillon Consulting Limited
Client Project #: 223723
Site Location: LAKE ENON (VEGETATION)
Sampler Initials: JM

ELEMENTS BY ATOMIC SPECTROSCOPY (SOLID)

Bureau Veritas ID		ZIJ643	ZIJ644	ZIJ645	ZIJ646	ZIJ647	ZIJ648		
Sampling Date		2024/05/30	2024/05/30	2024/05/30	2024/05/30	2024/05/30	2024/05/30		
	UNITS	24-AV-07	24-AV-08	24-AV-09	24-AV-10	24-AV-11	24-AV-12	RDL	QC Batch
Metals									
Acid Extractable Aluminum (Al)	mg/kg	320	1000	1000	270	760	77	10	9474082
Acid Extractable Antimony (Sb)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	9474082
Acid Extractable Arsenic (As)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	9474082
Acid Extractable Barium (Ba)	mg/kg	91	180	140	140	270	40	5.0	9474082
Acid Extractable Beryllium (Be)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	9474082
Acid Extractable Boron (B)	mg/kg	7.9	9.3	9.4	29	12	6.3	5.0	9474082
Acid Extractable Cadmium (Cd)	mg/kg	1.2	2.1	1.9	1.8	1.7	1.9	0.30	9474082
Acid Extractable Chromium (Cr)	mg/kg	<2.0	<2.0	<2.0	<2.0	2.0	<2.0	2.0	9474082
Acid Extractable Cobalt (Co)	mg/kg	<1.0	1.0	1.4	<1.0	<1.0	<1.0	1.0	9474082
Acid Extractable Copper (Cu)	mg/kg	7.7	5.6	5.4	6.3	6.7	16	2.0	9474082
Acid Extractable Iron (Fe)	mg/kg	750	1600	1200	440	1400	120	50	9474082
Acid Extractable Lead (Pb)	mg/kg	10	19	19	7.3	21	3.1	0.50	9474082
Acid Extractable Lithium (Li)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	9474082
Acid Extractable Manganese (Mn)	mg/kg	1100	2300	2500	710	1500	460	2.0	9474082
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	9474082
Acid Extractable Nickel (Ni)	mg/kg	<2.0	<2.0	2.0	<2.0	<2.0	<2.0	2.0	9474082
Acid Extractable Selenium (Se)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	9474082
Acid Extractable Silver (Ag)	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	9474082
Acid Extractable Strontium (Sr)	mg/kg	520	680	870	1300	480	310	5.0	9474082
Acid Extractable Thallium (Tl)	mg/kg	<0.10	<0.10	<0.10	0.14	<0.10	<0.10	0.10	9474082
Acid Extractable Uranium (U)	mg/kg	0.17	0.42	0.66	0.39	0.23	<0.10	0.10	9474082
Acid Extractable Vanadium (V)	mg/kg	<2.0	2.2	<2.0	<2.0	<2.0	<2.0	2.0	9474082
Acid Extractable Zinc (Zn)	mg/kg	110	140	150	180	130	46	5.0	9474082

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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GENERAL COMMENTS

Results relate only to the items tested.

Bureau Veritas 465 George St., Unit G, Sydney, NS, B1P 1K5 Tel:902 567 1255 Toll Free: 888 535 7770 Fax: 902 539 6504 www.bvna.com

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9474082	MTZ	Matrix Spike [ZIJ647-01]	Acid Extractable Antimony (Sb)	2024/06/24		116	%	75 - 125
			Acid Extractable Arsenic (As)	2024/06/24		111	%	75 - 125
			Acid Extractable Barium (Ba)	2024/06/24		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2024/06/24		112	%	75 - 125
			Acid Extractable Boron (B)	2024/06/24		108	%	75 - 125
			Acid Extractable Cadmium (Cd)	2024/06/24		110	%	75 - 125
			Acid Extractable Chromium (Cr)	2024/06/24		111	%	75 - 125
			Acid Extractable Cobalt (Co)	2024/06/24		111	%	75 - 125
			Acid Extractable Copper (Cu)	2024/06/24		112	%	75 - 125
			Acid Extractable Lead (Pb)	2024/06/24		105	%	75 - 125
			Acid Extractable Lithium (Li)	2024/06/24		114	%	75 - 125
			Acid Extractable Manganese (Mn)	2024/06/24		NC	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2024/06/24		114	%	75 - 125
			Acid Extractable Nickel (Ni)	2024/06/24		113	%	75 - 125
			Acid Extractable Selenium (Se)	2024/06/24		110	%	75 - 125
			Acid Extractable Silver (Ag)	2024/06/24		113	%	75 - 125
			Acid Extractable Strontium (Sr)	2024/06/24		NC	%	75 - 125
			Acid Extractable Thallium (Tl)	2024/06/24		113	%	75 - 125
			Acid Extractable Uranium (U)	2024/06/24		112	%	75 - 125
			Acid Extractable Vanadium (V)	2024/06/24		113	%	75 - 125
			Acid Extractable Zinc (Zn)	2024/06/24		NC	%	75 - 125
9474082	MTZ	Spiked Blank	Acid Extractable Antimony (Sb)	2024/06/25		110	%	75 - 125
			Acid Extractable Arsenic (As)	2024/06/25		105	%	75 - 125
			Acid Extractable Barium (Ba)	2024/06/25		100	%	75 - 125
			Acid Extractable Beryllium (Be)	2024/06/25		106	%	75 - 125
			Acid Extractable Boron (B)	2024/06/25		106	%	75 - 125
			Acid Extractable Cadmium (Cd)	2024/06/25		104	%	75 - 125
			Acid Extractable Chromium (Cr)	2024/06/25		104	%	75 - 125
			Acid Extractable Cobalt (Co)	2024/06/25		105	%	75 - 125
			Acid Extractable Copper (Cu)	2024/06/25		103	%	75 - 125
			Acid Extractable Lead (Pb)	2024/06/25		101	%	75 - 125
			Acid Extractable Lithium (Li)	2024/06/25		105	%	75 - 125
			Acid Extractable Manganese (Mn)	2024/06/25		104	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2024/06/25		109	%	75 - 125
			Acid Extractable Nickel (Ni)	2024/06/25		107	%	75 - 125
			Acid Extractable Selenium (Se)	2024/06/25		107	%	75 - 125
			Acid Extractable Silver (Ag)	2024/06/25		104	%	75 - 125
			Acid Extractable Strontium (Sr)	2024/06/25		100	%	75 - 125
			Acid Extractable Thallium (Tl)	2024/06/25		106	%	75 - 125
			Acid Extractable Uranium (U)	2024/06/25		104	%	75 - 125
			Acid Extractable Vanadium (V)	2024/06/25		107	%	75 - 125
			Acid Extractable Zinc (Zn)	2024/06/25		107	%	75 - 125
9474082	MTZ	Method Blank	Acid Extractable Aluminum (Al)	2024/06/24	<10		mg/kg	
			Acid Extractable Antimony (Sb)	2024/06/24	<2.0		mg/kg	
			Acid Extractable Arsenic (As)	2024/06/24	<2.0		mg/kg	
			Acid Extractable Barium (Ba)	2024/06/24	<5.0		mg/kg	
			Acid Extractable Beryllium (Be)	2024/06/24	<2.0		mg/kg	
			Acid Extractable Boron (B)	2024/06/24	<5.0		mg/kg	
			Acid Extractable Cadmium (Cd)	2024/06/24	<0.30		mg/kg	
			Acid Extractable Chromium (Cr)	2024/06/24	<2.0		mg/kg	
			Acid Extractable Cobalt (Co)	2024/06/24	<1.0		mg/kg	
			Acid Extractable Copper (Cu)	2024/06/24	<2.0		mg/kg	
			Acid Extractable Iron (Fe)	2024/06/24	<50		mg/kg	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Lead (Pb)	2024/06/24	<0.50		mg/kg	
			Acid Extractable Lithium (Li)	2024/06/24	<2.0		mg/kg	
			Acid Extractable Manganese (Mn)	2024/06/24	<2.0		mg/kg	
			Acid Extractable Molybdenum (Mo)	2024/06/24	<2.0		mg/kg	
			Acid Extractable Nickel (Ni)	2024/06/24	<2.0		mg/kg	
			Acid Extractable Selenium (Se)	2024/06/24	<2.0		mg/kg	
			Acid Extractable Silver (Ag)	2024/06/24	<0.50		mg/kg	
			Acid Extractable Strontium (Sr)	2024/06/24	<5.0		mg/kg	
			Acid Extractable Thallium (Tl)	2024/06/24	<0.10		mg/kg	
			Acid Extractable Uranium (U)	2024/06/24	<0.10		mg/kg	
			Acid Extractable Vanadium (V)	2024/06/24	<2.0		mg/kg	
			Acid Extractable Zinc (Zn)	2024/06/24	<5.0		mg/kg	
9474082	MTZ	RPD [ZIJ647-01]	Acid Extractable Aluminum (Al)	2024/06/24	33		%	35
			Acid Extractable Antimony (Sb)	2024/06/24	NC		%	35
			Acid Extractable Arsenic (As)	2024/06/24	NC		%	35
			Acid Extractable Barium (Ba)	2024/06/24	53 (1)		%	35
			Acid Extractable Beryllium (Be)	2024/06/24	NC		%	35
			Acid Extractable Boron (B)	2024/06/24	4.0		%	35
			Acid Extractable Cadmium (Cd)	2024/06/24	16		%	35
			Acid Extractable Chromium (Cr)	2024/06/24	0.011		%	35
			Acid Extractable Cobalt (Co)	2024/06/24	NC		%	35
			Acid Extractable Copper (Cu)	2024/06/24	5.3		%	35
			Acid Extractable Iron (Fe)	2024/06/24	54 (1)		%	35
			Acid Extractable Lead (Pb)	2024/06/24	30		%	35
			Acid Extractable Lithium (Li)	2024/06/24	NC		%	35
			Acid Extractable Manganese (Mn)	2024/06/24	47 (1)		%	35
			Acid Extractable Molybdenum (Mo)	2024/06/24	NC		%	35
			Acid Extractable Nickel (Ni)	2024/06/24	NC		%	35
			Acid Extractable Selenium (Se)	2024/06/24	NC		%	35
			Acid Extractable Silver (Ag)	2024/06/24	NC		%	35
			Acid Extractable Strontium (Sr)	2024/06/24	19		%	35
			Acid Extractable Thallium (Tl)	2024/06/24	NC		%	35
			Acid Extractable Uranium (U)	2024/06/24	14		%	35
			Acid Extractable Vanadium (V)	2024/06/24	NC		%	35
			Acid Extractable Zinc (Zn)	2024/06/24	26		%	35
9474381	SPY	Matrix Spike [ZIJ613-01]	Mercury (Hg)	2024/06/26		50 (2)	%	75 - 125
9474381	SPY	QC Standard	Mercury (Hg)	2024/06/26		82	%	N/A
9474381	SPY	Spiked Blank	Mercury (Hg)	2024/06/26		105	%	80 - 120
9474381	SPY	Method Blank	Mercury (Hg)	2024/06/26	<0.010		mg/kg	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9474381	SPY	RPD [ZIJ613-01]	Mercury (Hg)	2024/06/26	9.4		%	30

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Poor RPD due to sample inhomogeneity. Verified by repeat digestion and analysis.

(2) Matrix Spike exceeds acceptance limits, sample inhomogeneity suspected.

Bureau Veritas 465 George St., Unit G, Sydney, NS, B1P 1K5 Tel:902 567 1255 Toll Free: 888 535 7770 Fax: 902 539 6504 www.bvna.com

Bureau Veritas Job #: C4G5584
Report Date: 2024/06/26

Dillon Consulting Limited
Client Project #: 223723
Site Location: LAKE ENON (VEGETATION)
Sampler Initials: JM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Colleen Acker, B.Sc, Scientific Service Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Kathy Martin, Laboratory Manager responsible for Nova Scotia Environmental laboratory operations.

Bureau Veritas 465 George St., Unit G, Sydney, NS, B1P 1K5 Tel:902 567 1255 Toll Free: 888 535 7770 Fax: 902 539 6504 www.bvna.com

Your Project #: 22-3723-1003
Site Location: LAKE ENON (VEGETATION)

Attention: Nadine Wambolt

Dillon Consulting Limited
275 Charlotte St
Sydney, NS
CANADA B1P 1C6

Report Date: 2024/07/29
Report #: R8255172
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4K3650
Received: 2024/07/04, 16:00

Sample Matrix: Solid
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Mercury in biota (1)	6	2024/07/25	2024/07/26	ATL SOP 00026	EPA 245.6 R2.3 m
Metals in Terrestrial Biota (1)	6	2024/07/16	2024/07/16	ATL SOP 00058	EPA 6020B R3 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Bedford, 200 Bluewater Rd Suite 105, Bedford, NS, B4B 1G9

Your Project #: 22-3723-1003
Site Location: LAKE ENON (VEGETATION)

Attention: Nadine Wambolt

Dillon Consulting Limited
275 Charlotte St
Sydney, NS
CANADA B1P 1C6

Report Date: 2024/07/29
Report #: R8255172
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4K3650
Received: 2024/07/04, 16:00

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29 Jul 2024 17:14:51

Please direct all questions regarding this Certificate of Analysis to:
Natalie MacAskill, Key Account Specialist
Email: Natalie.MacAskill@bureauveritas.com
Phone# (902)567-1255 Ext:17

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Bureau Veritas Job #: C4K3650
Report Date: 2024/07/29

Dillon Consulting Limited
Client Project #: 22-3723-1003
Site Location: LAKE ENON (VEGETATION)
Sampler Initials: JM

MERCURY BY COLD VAPOUR AA (SOLID)

Bureau Veritas ID		ZQF405	ZQF420	ZQF422	ZQF424	ZQF425		
Sampling Date		2024/07/03	2024/07/03	2024/07/03	2024/07/03	2024/07/04		
	UNITS	24-WL3-VEG1-R	24-WL3-VEG2-R	24-WL3-VEG3-R	24-WL3-VEG4-R	24-WL3-VEG5-R	RDL	QC Batch
Metals								
Mercury (Hg)	mg/kg	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	9537184

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		ZQF426		
Sampling Date		2024/07/04		
	UNITS	24-WL3-VEG6-R	RDL	QC Batch
Metals				
Mercury (Hg)	mg/kg	<0.010	0.010	9537184

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas 465 George St., Unit G, Sydney, NS, B1P 1K5 Tel:902 567 1255 Toll Free: 888 535 7770 Fax: 902 539 6504 www.bvna.com

Bureau Veritas Job #: C4K3650
Report Date: 2024/07/29

Dillon Consulting Limited
Client Project #: 22-3723-1003
Site Location: LAKE ENON (VEGETATION)
Sampler Initials: JM

ELEMENTS BY ATOMIC SPECTROSCOPY (SOLID)

Bureau Veritas ID		ZQF405	ZQF420	ZQF422	ZQF424	ZQF425		
Sampling Date		2024/07/03	2024/07/03	2024/07/03	2024/07/03	2024/07/04		
	UNITS	24-WL3-VEG1-R	24-WL3-VEG2-R	24-WL3-VEG3-R	24-WL3-VEG4-R	24-WL3-VEG5-R	RDL	QC Batch
Metals								
Acid Extractable Aluminum (Al)	mg/kg	51	13	11	30	16	10	9516932
Acid Extractable Antimony (Sb)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	9516932
Acid Extractable Arsenic (As)	mg/kg	<2.0	<2.0	<2.0	5.9	<2.0	2.0	9516932
Acid Extractable Barium (Ba)	mg/kg	200	57	42	110	410	5.0	9516932
Acid Extractable Beryllium (Be)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	9516932
Acid Extractable Boron (B)	mg/kg	7.5	31	24	29	32	5.0	9516932
Acid Extractable Cadmium (Cd)	mg/kg	<0.30	0.37	0.54	0.77	0.61	0.30	9516932
Acid Extractable Chromium (Cr)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	9516932
Acid Extractable Cobalt (Co)	mg/kg	<1.0	<1.0	<1.0	4.8	<1.0	1.0	9516932
Acid Extractable Copper (Cu)	mg/kg	<2.0	5.4	6.1	7.9	3.7	2.0	9516932
Acid Extractable Iron (Fe)	mg/kg	250	<50	<50	2100	79	50	9516932
Acid Extractable Lead (Pb)	mg/kg	19	5.7	49	300	400	0.50	9516932
Acid Extractable Lithium (Li)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	9516932
Acid Extractable Manganese (Mn)	mg/kg	490	46	93	2300	150	2.0	9516932
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	9516932
Acid Extractable Nickel (Ni)	mg/kg	<2.0	<2.0	<2.0	11	<2.0	2.0	9516932
Acid Extractable Selenium (Se)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	9516932
Acid Extractable Silver (Ag)	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	9516932
Acid Extractable Strontium (Sr)	mg/kg	1600	2400	94	660	540	5.0	9516932
Acid Extractable Thallium (Tl)	mg/kg	<0.10	<0.10	<0.10	0.36	<0.10	0.10	9516932
Acid Extractable Uranium (U)	mg/kg	<0.10	<0.10	<0.10	0.24	<0.10	0.10	9516932
Acid Extractable Vanadium (V)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	9516932
Acid Extractable Zinc (Zn)	mg/kg	24	90	65	63	35	5.0	9516932

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Dillon Consulting Limited
Client Project #: 22-3723-1003
Site Location: LAKE ENON (VEGETATION)
Sampler Initials: JM

ELEMENTS BY ATOMIC SPECTROSCOPY (SOLID)

Bureau Veritas ID		ZQF426		
Sampling Date		2024/07/04		
	UNITS	24-WL3-VEG6-R	RDL	QC Batch
Metals				
Acid Extractable Aluminum (Al)	mg/kg	29	10	9516932
Acid Extractable Antimony (Sb)	mg/kg	<2.0	2.0	9516932
Acid Extractable Arsenic (As)	mg/kg	<2.0	2.0	9516932
Acid Extractable Barium (Ba)	mg/kg	81	5.0	9516932
Acid Extractable Beryllium (Be)	mg/kg	<2.0	2.0	9516932
Acid Extractable Boron (B)	mg/kg	20	5.0	9516932
Acid Extractable Cadmium (Cd)	mg/kg	<0.30	0.30	9516932
Acid Extractable Chromium (Cr)	mg/kg	<2.0	2.0	9516932
Acid Extractable Cobalt (Co)	mg/kg	<1.0	1.0	9516932
Acid Extractable Copper (Cu)	mg/kg	6.7	2.0	9516932
Acid Extractable Iron (Fe)	mg/kg	93	50	9516932
Acid Extractable Lead (Pb)	mg/kg	9.8	0.50	9516932
Acid Extractable Lithium (Li)	mg/kg	<2.0	2.0	9516932
Acid Extractable Manganese (Mn)	mg/kg	77	2.0	9516932
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	2.0	9516932
Acid Extractable Nickel (Ni)	mg/kg	<2.0	2.0	9516932
Acid Extractable Selenium (Se)	mg/kg	<2.0	2.0	9516932
Acid Extractable Silver (Ag)	mg/kg	<0.50	0.50	9516932
Acid Extractable Strontium (Sr)	mg/kg	440	5.0	9516932
Acid Extractable Thallium (Tl)	mg/kg	<0.10	0.10	9516932
Acid Extractable Uranium (U)	mg/kg	<0.10	0.10	9516932
Acid Extractable Vanadium (V)	mg/kg	<2.0	2.0	9516932
Acid Extractable Zinc (Zn)	mg/kg	36	5.0	9516932

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas 465 George St., Unit G, Sydney, NS, B1P 1K5 Tel:902 567 1255 Toll Free: 888 535 7770 Fax: 902 539 6504 www.bvna.com

GENERAL COMMENTS

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9516932	MTZ	Matrix Spike [ZQF425-01]	Acid Extractable Antimony (Sb)	2024/07/16		107	%	75 - 125
			Acid Extractable Arsenic (As)	2024/07/16		106	%	75 - 125
			Acid Extractable Barium (Ba)	2024/07/16		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2024/07/16		101	%	75 - 125
			Acid Extractable Boron (B)	2024/07/16		114	%	75 - 125
			Acid Extractable Cadmium (Cd)	2024/07/16		105	%	75 - 125
			Acid Extractable Chromium (Cr)	2024/07/16		107	%	75 - 125
			Acid Extractable Cobalt (Co)	2024/07/16		106	%	75 - 125
			Acid Extractable Copper (Cu)	2024/07/16		108	%	75 - 125
			Acid Extractable Lead (Pb)	2024/07/16		NC	%	75 - 125
			Acid Extractable Lithium (Li)	2024/07/16		107	%	75 - 125
			Acid Extractable Manganese (Mn)	2024/07/16		NC	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2024/07/16		111	%	75 - 125
			Acid Extractable Nickel (Ni)	2024/07/16		106	%	75 - 125
			Acid Extractable Selenium (Se)	2024/07/16		101	%	75 - 125
			Acid Extractable Silver (Ag)	2024/07/16		104	%	75 - 125
			Acid Extractable Strontium (Sr)	2024/07/16		NC	%	75 - 125
			Acid Extractable Thallium (Tl)	2024/07/16		105	%	75 - 125
			Acid Extractable Uranium (U)	2024/07/16		105	%	75 - 125
			Acid Extractable Vanadium (V)	2024/07/16		107	%	75 - 125
			Acid Extractable Zinc (Zn)	2024/07/16		122	%	75 - 125
9516932	MTZ	Spiked Blank	Acid Extractable Antimony (Sb)	2024/07/16		107	%	75 - 125
			Acid Extractable Arsenic (As)	2024/07/16		102	%	75 - 125
			Acid Extractable Barium (Ba)	2024/07/16		101	%	75 - 125
			Acid Extractable Beryllium (Be)	2024/07/16		97	%	75 - 125
			Acid Extractable Boron (B)	2024/07/16		98	%	75 - 125
			Acid Extractable Cadmium (Cd)	2024/07/16		101	%	75 - 125
			Acid Extractable Chromium (Cr)	2024/07/16		100	%	75 - 125
			Acid Extractable Cobalt (Co)	2024/07/16		101	%	75 - 125
			Acid Extractable Copper (Cu)	2024/07/16		100	%	75 - 125
			Acid Extractable Lead (Pb)	2024/07/16		99	%	75 - 125
			Acid Extractable Lithium (Li)	2024/07/16		102	%	75 - 125
			Acid Extractable Manganese (Mn)	2024/07/16		102	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2024/07/16		105	%	75 - 125
			Acid Extractable Nickel (Ni)	2024/07/16		102	%	75 - 125
			Acid Extractable Selenium (Se)	2024/07/16		99	%	75 - 125
			Acid Extractable Silver (Ag)	2024/07/16		104	%	75 - 125
			Acid Extractable Strontium (Sr)	2024/07/16		101	%	75 - 125
			Acid Extractable Thallium (Tl)	2024/07/16		102	%	75 - 125
			Acid Extractable Uranium (U)	2024/07/16		99	%	75 - 125
			Acid Extractable Vanadium (V)	2024/07/16		102	%	75 - 125
			Acid Extractable Zinc (Zn)	2024/07/16		103	%	75 - 125
9516932	MTZ	Method Blank	Acid Extractable Aluminum (Al)	2024/07/16	<10		mg/kg	
			Acid Extractable Antimony (Sb)	2024/07/16	<2.0		mg/kg	
			Acid Extractable Arsenic (As)	2024/07/16	<2.0		mg/kg	
			Acid Extractable Barium (Ba)	2024/07/16	<5.0		mg/kg	
			Acid Extractable Beryllium (Be)	2024/07/16	<2.0		mg/kg	
			Acid Extractable Boron (B)	2024/07/16	<5.0		mg/kg	
			Acid Extractable Cadmium (Cd)	2024/07/16	<0.30		mg/kg	
			Acid Extractable Chromium (Cr)	2024/07/16	<2.0		mg/kg	
			Acid Extractable Cobalt (Co)	2024/07/16	<1.0		mg/kg	
			Acid Extractable Copper (Cu)	2024/07/16	<2.0		mg/kg	
			Acid Extractable Iron (Fe)	2024/07/16	<50		mg/kg	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Lead (Pb)	2024/07/16	<0.50		mg/kg	
			Acid Extractable Lithium (Li)	2024/07/16	<2.0		mg/kg	
			Acid Extractable Manganese (Mn)	2024/07/16	<2.0		mg/kg	
			Acid Extractable Molybdenum (Mo)	2024/07/16	<2.0		mg/kg	
			Acid Extractable Nickel (Ni)	2024/07/16	<2.0		mg/kg	
			Acid Extractable Selenium (Se)	2024/07/16	<2.0		mg/kg	
			Acid Extractable Silver (Ag)	2024/07/16	<0.50		mg/kg	
			Acid Extractable Strontium (Sr)	2024/07/16	<5.0		mg/kg	
			Acid Extractable Thallium (Tl)	2024/07/16	<0.10		mg/kg	
			Acid Extractable Uranium (U)	2024/07/16	<0.10		mg/kg	
			Acid Extractable Vanadium (V)	2024/07/16	<2.0		mg/kg	
			Acid Extractable Zinc (Zn)	2024/07/16	<5.0		mg/kg	
9516932	MTZ	RPD [ZQF425-01]	Acid Extractable Aluminum (Al)	2024/07/16	5.8		%	35
			Acid Extractable Antimony (Sb)	2024/07/16	NC		%	35
			Acid Extractable Arsenic (As)	2024/07/16	NC		%	35
			Acid Extractable Barium (Ba)	2024/07/16	9.5		%	35
			Acid Extractable Beryllium (Be)	2024/07/16	NC		%	35
			Acid Extractable Boron (B)	2024/07/16	10		%	35
			Acid Extractable Cadmium (Cd)	2024/07/16	7.2		%	35
			Acid Extractable Chromium (Cr)	2024/07/16	NC		%	35
			Acid Extractable Cobalt (Co)	2024/07/16	NC		%	35
			Acid Extractable Copper (Cu)	2024/07/16	4.5		%	35
			Acid Extractable Iron (Fe)	2024/07/16	11		%	35
			Acid Extractable Lead (Pb)	2024/07/16	4.1		%	35
			Acid Extractable Lithium (Li)	2024/07/16	NC		%	35
			Acid Extractable Manganese (Mn)	2024/07/16	23		%	35
			Acid Extractable Molybdenum (Mo)	2024/07/16	NC		%	35
			Acid Extractable Nickel (Ni)	2024/07/16	NC		%	35
			Acid Extractable Selenium (Se)	2024/07/16	NC		%	35
			Acid Extractable Silver (Ag)	2024/07/16	NC		%	35
			Acid Extractable Strontium (Sr)	2024/07/16	2.5		%	35
			Acid Extractable Thallium (Tl)	2024/07/16	NC		%	35
			Acid Extractable Uranium (U)	2024/07/16	NC		%	35
			Acid Extractable Vanadium (V)	2024/07/16	NC		%	35
			Acid Extractable Zinc (Zn)	2024/07/16	1.8		%	35
9537184	JEP	Matrix Spike [ZQF425-01]	Mercury (Hg)	2024/07/26		60 (1)	%	75 - 125
9537184	JEP	QC Standard	Mercury (Hg)	2024/07/26		99	%	75 - 125
9537184	JEP	Spiked Blank	Mercury (Hg)	2024/07/26		109	%	80 - 120
9537184	JEP	Method Blank	Mercury (Hg)	2024/07/26	<0.010		mg/kg	
9537184	JEP	RPD [ZQF425-01]	Mercury (Hg)	2024/07/26	NC		%	30

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Matrix Spike exceeds acceptance limits, probable matrix interference.

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Bureau Veritas Job #: C4K3650
Report Date: 2024/07/29

Dillon Consulting Limited
Client Project #: 22-3723-1003
Site Location: LAKE ENON (VEGETATION)
Sampler Initials: JM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Janah Rhyno, Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Kathy Martin, Laboratory Manager responsible for Nova Scotia Environmental laboratory operations.

Bureau Veritas 465 George St., Unit G, Sydney, NS, B1P 1K5 Tel:902 567 1255 Toll Free: 888 535 7770 Fax: 902 539 6504 www.bvna.com

Your Project #: 223723.1003
Site Location: LAKE ENON

Attention: Nadine Wambolt

Dillon Consulting Limited
275 Charlotte St
Sydney, NS
CANADA B1P 1C6

Report Date: 2024/11/12
Report #: R8400861
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4W4974
Received: 2024/10/16, 16:55

Sample Matrix: Solid
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Metals in Terrestrial Biota (1)	6	2024/11/07	2024/11/07	ATL SOP 00058	EPA 6020B R3 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Bedford, 200 Bluewater Rd Suite 105, Bedford, NS, B4B 1G9

Your Project #: 223723.1003
Site Location: LAKE ENON

Attention: Nadine Wambolt

Dillon Consulting Limited
275 Charlotte St
Sydney, NS
CANADA B1P 1C6

Report Date: 2024/11/12
Report #: R8400861
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4W4974
Received: 2024/10/16, 16:55

Encryption Key

AUTHORIZED REPORT
RAPPORT AUTORISÉ

Bureau Veritas
12 Nov 2024 09:08:09

Please direct all questions regarding this Certificate of Analysis to:
Natalie MacAskill, Key Account Specialist
Email: Natalie.MacAskill@bureauveritas.com
Phone# (902)567-1255 Ext:17

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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Kathy Martin, Laboratory Manager responsible for Nova Scotia Environmental laboratory operations.

ELEMENTS BY ATOMIC SPECTROSCOPY (SOLID)

Bureau Veritas ID		AFZT58	AFZT90	AFZT91	AFZT92	AFZT93		
Sampling Date		2024/07/03	2024/07/03	2024/07/03	2024/07/03	2024/07/03		
	UNITS	24-WL3-VEG1	24-WL3-VEG2	24-WL3-VEG3	24-WL3-VEG4	24-WL3-VEG5	RDL	QC Batch
Metals								
Acid Extractable Aluminum (Al)	mg/kg	<10	64	15	20	18	10	9751184
Acid Extractable Antimony (Sb)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	9751184
Acid Extractable Arsenic (As)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	9751184
Acid Extractable Barium (Ba)	mg/kg	320	62	24	33	170	5.0	9751184
Acid Extractable Beryllium (Be)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	9751184
Acid Extractable Boron (B)	mg/kg	9.7	31	18	33	30	5.0	9751184
Acid Extractable Cadmium (Cd)	mg/kg	<0.30	0.39	0.84	<0.30	0.50	0.30	9751184
Acid Extractable Chromium (Cr)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	9751184
Acid Extractable Cobalt (Co)	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	9751184
Acid Extractable Copper (Cu)	mg/kg	<2.0	6.1	3.3	4.5	3.3	2.0	9751184
Acid Extractable Iron (Fe)	mg/kg	52	130	<50	76	76	50	9751184
Acid Extractable Lead (Pb)	mg/kg	0.80	1.4	2.3	2.7	37	0.50	9751184
Acid Extractable Lithium (Li)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	9751184
Acid Extractable Manganese (Mn)	mg/kg	500	42	69	46	140	2.0	9751184
Acid Extractable Molybdenum (Mo)	mg/kg	2.2	<2.0	<2.0	<2.0	<2.0	2.0	9751184
Acid Extractable Nickel (Ni)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	9751184
Acid Extractable Selenium (Se)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	9751184
Acid Extractable Silver (Ag)	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	9751184
Acid Extractable Strontium (Sr)	mg/kg	2700	2800	250	790	630	5.0	9751184
Acid Extractable Thallium (Tl)	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	9751184
Acid Extractable Uranium (U)	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	9751184
Acid Extractable Vanadium (V)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	9751184
Acid Extractable Zinc (Zn)	mg/kg	21	80	55	20	37	5.0	9751184

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ELEMENTS BY ATOMIC SPECTROSCOPY (SOLID)

Bureau Veritas ID		AFZT94		
Sampling Date		2024/07/03		
	UNITS	24-WL3-VEG6	RDL	QC Batch
Metals				
Acid Extractable Aluminum (Al)	mg/kg	27	10	9751184
Acid Extractable Antimony (Sb)	mg/kg	<2.0	2.0	9751184
Acid Extractable Arsenic (As)	mg/kg	<2.0	2.0	9751184
Acid Extractable Barium (Ba)	mg/kg	74	5.0	9751184
Acid Extractable Beryllium (Be)	mg/kg	<2.0	2.0	9751184
Acid Extractable Boron (B)	mg/kg	23	5.0	9751184
Acid Extractable Cadmium (Cd)	mg/kg	<0.30	0.30	9751184
Acid Extractable Chromium (Cr)	mg/kg	<2.0	2.0	9751184
Acid Extractable Cobalt (Co)	mg/kg	<1.0	1.0	9751184
Acid Extractable Copper (Cu)	mg/kg	6.8	2.0	9751184
Acid Extractable Iron (Fe)	mg/kg	90	50	9751184
Acid Extractable Lead (Pb)	mg/kg	1.5	0.50	9751184
Acid Extractable Lithium (Li)	mg/kg	<2.0	2.0	9751184
Acid Extractable Manganese (Mn)	mg/kg	100	2.0	9751184
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	2.0	9751184
Acid Extractable Nickel (Ni)	mg/kg	<2.0	2.0	9751184
Acid Extractable Selenium (Se)	mg/kg	<2.0	2.0	9751184
Acid Extractable Silver (Ag)	mg/kg	<0.50	0.50	9751184
Acid Extractable Strontium (Sr)	mg/kg	520	5.0	9751184
Acid Extractable Thallium (Tl)	mg/kg	<0.10	0.10	9751184
Acid Extractable Uranium (U)	mg/kg	<0.10	0.10	9751184
Acid Extractable Vanadium (V)	mg/kg	<2.0	2.0	9751184
Acid Extractable Zinc (Zn)	mg/kg	56	5.0	9751184

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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GENERAL COMMENTS

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9751184	MOA	Matrix Spike [AFZT58-01]	Acid Extractable Antimony (Sb)	2024/11/07		99	%	75 - 125
			Acid Extractable Arsenic (As)	2024/11/07		103	%	75 - 125
			Acid Extractable Barium (Ba)	2024/11/07		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2024/11/07		98	%	75 - 125
			Acid Extractable Boron (B)	2024/11/07		97	%	75 - 125
			Acid Extractable Cadmium (Cd)	2024/11/07		104	%	75 - 125
			Acid Extractable Chromium (Cr)	2024/11/07		104	%	75 - 125
			Acid Extractable Cobalt (Co)	2024/11/07		102	%	75 - 125
			Acid Extractable Copper (Cu)	2024/11/07		102	%	75 - 125
			Acid Extractable Lead (Pb)	2024/11/07		101	%	75 - 125
			Acid Extractable Lithium (Li)	2024/11/07		102	%	75 - 125
			Acid Extractable Manganese (Mn)	2024/11/07		NC	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2024/11/07		112	%	75 - 125
			Acid Extractable Nickel (Ni)	2024/11/07		103	%	75 - 125
			Acid Extractable Selenium (Se)	2024/11/07		99	%	75 - 125
			Acid Extractable Silver (Ag)	2024/11/07		102	%	75 - 125
			Acid Extractable Strontium (Sr)	2024/11/07		NC	%	75 - 125
			Acid Extractable Thallium (Tl)	2024/11/07		102	%	75 - 125
			Acid Extractable Uranium (U)	2024/11/07		101	%	75 - 125
			Acid Extractable Vanadium (V)	2024/11/07		104	%	75 - 125
			Acid Extractable Zinc (Zn)	2024/11/07		106	%	75 - 125
9751184	MOA	Spiked Blank	Acid Extractable Antimony (Sb)	2024/11/07		101	%	75 - 125
			Acid Extractable Arsenic (As)	2024/11/07		99	%	75 - 125
			Acid Extractable Barium (Ba)	2024/11/07		97	%	75 - 125
			Acid Extractable Beryllium (Be)	2024/11/07		93	%	75 - 125
			Acid Extractable Boron (B)	2024/11/07		92	%	75 - 125
			Acid Extractable Cadmium (Cd)	2024/11/07		99	%	75 - 125
			Acid Extractable Chromium (Cr)	2024/11/07		99	%	75 - 125
			Acid Extractable Cobalt (Co)	2024/11/07		98	%	75 - 125
			Acid Extractable Copper (Cu)	2024/11/07		97	%	75 - 125
			Acid Extractable Lead (Pb)	2024/11/07		95	%	75 - 125
			Acid Extractable Lithium (Li)	2024/11/07		96	%	75 - 125
			Acid Extractable Manganese (Mn)	2024/11/07		98	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2024/11/07		97	%	75 - 125
			Acid Extractable Nickel (Ni)	2024/11/07		98	%	75 - 125
			Acid Extractable Selenium (Se)	2024/11/07		99	%	75 - 125
			Acid Extractable Silver (Ag)	2024/11/07		100	%	75 - 125
			Acid Extractable Strontium (Sr)	2024/11/07		100	%	75 - 125
			Acid Extractable Thallium (Tl)	2024/11/07		97	%	75 - 125
			Acid Extractable Uranium (U)	2024/11/07		95	%	75 - 125
			Acid Extractable Vanadium (V)	2024/11/07		98	%	75 - 125
			Acid Extractable Zinc (Zn)	2024/11/07		99	%	75 - 125
9751184	MOA	Method Blank	Acid Extractable Aluminum (Al)	2024/11/07	<10		mg/kg	
			Acid Extractable Antimony (Sb)	2024/11/07	<2.0		mg/kg	
			Acid Extractable Arsenic (As)	2024/11/07	<2.0		mg/kg	
			Acid Extractable Barium (Ba)	2024/11/07	<5.0		mg/kg	
			Acid Extractable Beryllium (Be)	2024/11/07	<2.0		mg/kg	
			Acid Extractable Boron (B)	2024/11/07	<5.0		mg/kg	
			Acid Extractable Cadmium (Cd)	2024/11/07	<0.30		mg/kg	
			Acid Extractable Chromium (Cr)	2024/11/07	<2.0		mg/kg	
			Acid Extractable Cobalt (Co)	2024/11/07	<1.0		mg/kg	
			Acid Extractable Copper (Cu)	2024/11/07	<2.0		mg/kg	
			Acid Extractable Iron (Fe)	2024/11/07	<50		mg/kg	
			Acid Extractable Lead (Pb)	2024/11/07	<0.50		mg/kg	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Lithium (Li)	2024/11/07	<2.0		mg/kg	
			Acid Extractable Manganese (Mn)	2024/11/07	<2.0		mg/kg	
			Acid Extractable Molybdenum (Mo)	2024/11/07	<2.0		mg/kg	
			Acid Extractable Nickel (Ni)	2024/11/07	<2.0		mg/kg	
			Acid Extractable Selenium (Se)	2024/11/07	<2.0		mg/kg	
			Acid Extractable Silver (Ag)	2024/11/07	<0.50		mg/kg	
			Acid Extractable Strontium (Sr)	2024/11/07	<5.0		mg/kg	
			Acid Extractable Thallium (Tl)	2024/11/07	<0.10		mg/kg	
			Acid Extractable Uranium (U)	2024/11/07	<0.10		mg/kg	
			Acid Extractable Vanadium (V)	2024/11/07	<2.0		mg/kg	
			Acid Extractable Zinc (Zn)	2024/11/07	<5.0		mg/kg	
9751184	MOA	RPD [AFZT58-01]	Acid Extractable Aluminum (Al)	2024/11/07	NC		%	35
			Acid Extractable Antimony (Sb)	2024/11/07	NC		%	35
			Acid Extractable Arsenic (As)	2024/11/07	NC		%	35
			Acid Extractable Barium (Ba)	2024/11/07	4.4		%	35
			Acid Extractable Beryllium (Be)	2024/11/07	NC		%	35
			Acid Extractable Boron (B)	2024/11/07	4.9		%	35
			Acid Extractable Cadmium (Cd)	2024/11/07	NC		%	35
			Acid Extractable Chromium (Cr)	2024/11/07	NC		%	35
			Acid Extractable Cobalt (Co)	2024/11/07	NC		%	35
			Acid Extractable Copper (Cu)	2024/11/07	NC		%	35
			Acid Extractable Iron (Fe)	2024/11/07	2.1		%	35
			Acid Extractable Lead (Pb)	2024/11/07	0.82		%	35
			Acid Extractable Lithium (Li)	2024/11/07	NC		%	35
			Acid Extractable Manganese (Mn)	2024/11/07	8.6		%	35
			Acid Extractable Molybdenum (Mo)	2024/11/07	3.4		%	35
			Acid Extractable Nickel (Ni)	2024/11/07	NC		%	35
			Acid Extractable Selenium (Se)	2024/11/07	NC		%	35
			Acid Extractable Silver (Ag)	2024/11/07	NC		%	35
			Acid Extractable Strontium (Sr)	2024/11/07	0.94		%	35
			Acid Extractable Thallium (Tl)	2024/11/07	NC		%	35
			Acid Extractable Uranium (U)	2024/11/07	NC		%	35
			Acid Extractable Vanadium (V)	2024/11/07	NC		%	35
			Acid Extractable Zinc (Zn)	2024/11/07	5.9		%	35

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Janah Rhyno, Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Kathy Martin, Laboratory Manager responsible for Nova Scotia Environmental laboratory operations.

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Your Project #: 223723
Site Location: LAKE ENON (TISSUES)

Attention: Nadine Wambolt

Dillon Consulting Limited
275 Charlotte St
Sydney, NS
CANADA B1P 1C6

Report Date: 2024/06/28
Report #: R8213603
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4G5585
Received: 2024/06/03, 14:30

Sample Matrix: Solid
Samples Received: 12

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Mercury in biota (1)	12	2024/06/20	2024/06/21	ATL SOP 00026	EPA 245.6 R2.3 m
Metals in Tissue (1)	12	2024/06/20	2024/06/22	ATL SOP 00058	EPA 6020B R2 m
Moisture (1)	12	N/A	2024/06/14	ATL SOP 00001	OMOE Handbook 1983 m
Weight of Tissue (1)	12	N/A	2024/06/07		

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Bedford, 200 Bluewater Rd Suite 105, Bedford, NS, B4B 1G9

Your Project #: 223723
Site Location: LAKE ENON (TISSUES)

Attention: Nadine Wambolt

Dillon Consulting Limited
275 Charlotte St
Sydney, NS
CANADA B1P 1C6

Report Date: 2024/06/28
Report #: R8213603
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4G5585
Received: 2024/06/03, 14:30

Encryption Key

Bureau Veritas
28 Jun 2024 11:26:12

Please direct all questions regarding this Certificate of Analysis to:
Natalie MacAskill, Key Account Specialist
Email: Natalie.MacAskill@bureauveritas.com
Phone# (902)567-1255 Ext:17

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Bureau Veritas Job #: C4G5585
Report Date: 2024/06/28

Dillon Consulting Limited
Client Project #: 223723
Site Location: LAKE ENON (TISSUES)
Sampler Initials: JM

RESULTS OF ANALYSES OF SOLID

Bureau Veritas ID		ZIJ687	ZIJ716	ZIJ717	ZIJ718	ZIJ719	ZIJ721	ZIJ722		
Sampling Date		2024/05/28	2024/05/30	2024/05/30	2024/05/30	2024/05/30	2024/05/30	2024/05/30		
	UNITS	24-BV-01	24-BV-02	24-BV-03	24-BV-04	24-BV-05	24-BV-06	24-BV-07	RDL	QC Batch
Inorganics										
Moisture	%	89	89	88	87	88	87	88	1.0	9452183
Weight	g	58.0	68.0	160	159	246	84.1	68.4	0.10	9440277

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		ZIJ723	ZIJ724	ZIJ725	ZIJ726	ZIJ727		
Sampling Date		2024/05/30	2024/05/30	2024/05/30	2024/05/30	2024/05/30		
	UNITS	24-BV-08	24-BV-09	24-BV-10	24-BV-11	24-BV-12	RDL	QC Batch
Inorganics								
Moisture	%	88	87	86	86	88	1.0	9452183
Weight	g	141	105	164	158	183	0.10	9440277

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C4G5585
Report Date: 2024/06/28

Dillon Consulting Limited
Client Project #: 223723
Site Location: LAKE ENON (TISSUES)
Sampler Initials: JM

MERCURY BY COLD VAPOUR AA (SOLID)

Bureau Veritas ID		ZIJ687	ZIJ716	ZIJ717	ZIJ718	ZIJ719	ZIJ721	ZIJ722		
Sampling Date		2024/05/28	2024/05/30	2024/05/30	2024/05/30	2024/05/30	2024/05/30	2024/05/30		
	UNITS	24-BV-01	24-BV-02	24-BV-03	24-BV-04	24-BV-05	24-BV-06	24-BV-07	RDL	QC Batch
Metals										
Mercury (Hg)	mg/kg	0.067	0.033	0.051	0.063	0.061	0.040	0.031	0.010	9467946

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		ZIJ723	ZIJ724	ZIJ725	ZIJ726	ZIJ727		
Sampling Date		2024/05/30	2024/05/30	2024/05/30	2024/05/30	2024/05/30		
	UNITS	24-BV-08	24-BV-09	24-BV-10	24-BV-11	24-BV-12	RDL	QC Batch
Metals								
Mercury (Hg)	mg/kg	0.027	0.049	0.059	0.051	0.048	0.010	9467946

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C4G5585
Report Date: 2024/06/28

Dillon Consulting Limited
Client Project #: 223723
Site Location: LAKE ENON (TISSUES)
Sampler Initials: JM

ELEMENTS BY ICP/MS (SOLID)

Bureau Veritas ID		ZIJ687	ZIJ716	ZIJ717	ZIJ718	ZIJ719	ZIJ721	ZIJ722		
Sampling Date		2024/05/28	2024/05/30	2024/05/30	2024/05/30	2024/05/30	2024/05/30	2024/05/30		
	UNITS	24-BV-01	24-BV-02	24-BV-03	24-BV-04	24-BV-05	24-BV-06	24-BV-07	RDL	QC Batch
Metals										
Aluminum (Al)	mg/kg	58	110	120	84	110	170	83	2.5	9468001
Antimony (Sb)	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	9468001
Arsenic (As)	mg/kg	<0.50	<0.50	<0.50	<0.50	0.52	<0.50	<0.50	0.50	9468001
Barium (Ba)	mg/kg	110	140	160	100	130	130	120	1.5	9468001
Beryllium (Be)	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	9468001
Boron (B)	mg/kg	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	1.5	9468001
Cadmium (Cd)	mg/kg	2.4	2.1	2.5	2.7	3.3	2.5	1.6	0.050	9468001
Chromium (Cr)	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	9468001
Cobalt (Co)	mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	9468001
Copper (Cu)	mg/kg	1.4	1.3	1.5	1.4	1.6	1.8	1.3	0.50	9468001
Iron (Fe)	mg/kg	160	220	240	200	250	300	170	15	9468001
Lead (Pb)	mg/kg	1.6	1.8	2.1	1.7	2.1	3.8	1.8	0.18	9468001
Lithium (Li)	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	9468001
Manganese (Mn)	mg/kg	670	920	840	470	560	760	710	0.50	9468001
Molybdenum (Mo)	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	9468001
Nickel (Ni)	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	9468001
Selenium (Se)	mg/kg	0.87	0.80	0.93	0.92	1.0	0.84	0.80	0.50	9468001
Silver (Ag)	mg/kg	1.0	0.98	1.2	1.1	1.3	0.69	0.63	0.12	9468001
Strontium (Sr)	mg/kg	230	280	350	210	310	270	290	1.5	9468001
Thallium (Tl)	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	9468001
Tin (Sn)	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	9468001
Uranium (U)	mg/kg	0.041	0.049	0.046	0.043	0.054	0.056	0.043	0.020	9468001
Vanadium (V)	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	9468001
Zinc (Zn)	mg/kg	17	20	24	19	22	33	28	1.5	9468001

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C4G5585
Report Date: 2024/06/28

Dillon Consulting Limited
Client Project #: 223723
Site Location: LAKE ENON (TISSUES)
Sampler Initials: JM

ELEMENTS BY ICP/MS (SOLID)

Bureau Veritas ID		ZIJ723	ZIJ724	ZIJ725		ZIJ726		ZIJ727		
Sampling Date		2024/05/30	2024/05/30	2024/05/30		2024/05/30		2024/05/30		
	UNITS	24-BV-08	24-BV-09	24-BV-10	QC Batch	24-BV-11	QC Batch	24-BV-12	RDL	QC Batch
Metals										
Aluminum (Al)	mg/kg	92	70	120	9468001	200	9468001	110	2.5	9468001
Antimony (Sb)	mg/kg	<0.50	<0.50	<0.50	9468001	<0.50	9468001	<0.50	0.50	9468001
Arsenic (As)	mg/kg	<0.50	<0.50	<0.50	9468001	0.54	9468001	<0.50	0.50	9468001
Barium (Ba)	mg/kg	98	140	140	9468001	140	9468001	63	1.5	9468001
Beryllium (Be)	mg/kg	<0.50	<0.50	<0.50	9468001	<0.50	9468001	<0.50	0.50	9468001
Boron (B)	mg/kg	<1.5	<1.5	<1.5	9468001	<1.5	9468001	<1.5	1.5	9468001
Cadmium (Cd)	mg/kg	2.6	2.7	3.2	9468001	4.5	9468001	3.9	0.050	9468001
Chromium (Cr)	mg/kg	<0.50	<0.50	<0.50	9468001	<0.50	9468001	<0.50	0.50	9468001
Cobalt (Co)	mg/kg	<0.20	<0.20	<0.20	9468001	0.21	9468001	<0.20	0.20	9468001
Copper (Cu)	mg/kg	1.3	1.4	1.6	9468001	1.7	9468001	1.3	0.50	9468001
Iron (Fe)	mg/kg	180	200	270	9468001	360	9468001	200	15	9468001
Lead (Pb)	mg/kg	1.6	1.5	2.6	9468001	4.0	9468001	2.2	0.18	9468001
Lithium (Li)	mg/kg	<0.50	<0.50	<0.50	9468001	<0.50	9468001	<0.50	0.50	9468001
Manganese (Mn)	mg/kg	500	810	690	9468001	770	9468001	330	0.50	9468001
Molybdenum (Mo)	mg/kg	<0.50	<0.50	<0.50	9468001	<0.50	9468001	<0.50	0.50	9468001
Nickel (Ni)	mg/kg	<0.50	<0.50	<0.50	9468001	<0.50	9468001	<0.50	0.50	9468001
Selenium (Se)	mg/kg	0.85	1.1	1.0	9468001	1.2	9468001	0.87	0.50	9468001
Silver (Ag)	mg/kg	0.73	1.0	1.4	9468001	0.79	9479239	1.0	0.12	9468001
Strontium (Sr)	mg/kg	200	450	310	9468001	240	9479239	140	1.5	9468001
Thallium (Tl)	mg/kg	<0.020	<0.020	<0.020	9468001	<0.020	9468001	<0.020	0.020	9468001
Tin (Sn)	mg/kg	<0.50	<0.50	<0.50	9468001	<0.50	9468001	<0.50	0.50	9468001
Uranium (U)	mg/kg	0.037	0.042	0.056	9468001	0.066	9468001	0.040	0.020	9468001
Vanadium (V)	mg/kg	<0.50	<0.50	<0.50	9468001	<0.50	9468001	<0.50	0.50	9468001
Zinc (Zn)	mg/kg	21	23	22	9468001	23	9468001	15	1.5	9468001

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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GENERAL COMMENTS

Sample ZIJ726, Metals in Tissue: Test repeated.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9452183	RD4	RPD [ZIJ716-01]	Moisture	2024/06/14	0.79		%	25
9467946	SPY	Matrix Spike [ZIJ726-01]	Mercury (Hg)	2024/06/21		100	%	75 - 125
9467946	SPY	QC Standard	Mercury (Hg)	2024/06/21		93	%	75 - 125
9467946	SPY	Spiked Blank	Mercury (Hg)	2024/06/21		96	%	80 - 120
9467946	SPY	Method Blank	Mercury (Hg)	2024/06/21	<0.010		mg/kg	
9467946	SPY	RPD [ZIJ726-01]	Mercury (Hg)	2024/06/21	13		%	30
9468001	MTZ	Matrix Spike [ZIJ726-01]	Aluminum (Al)	2024/06/22		NC	%	75 - 125
			Antimony (Sb)	2024/06/22		78	%	75 - 125
			Arsenic (As)	2024/06/22		101	%	75 - 125
			Barium (Ba)	2024/06/22		NC	%	75 - 125
			Beryllium (Be)	2024/06/22		93	%	75 - 125
			Boron (B)	2024/06/22		86	%	75 - 125
			Cadmium (Cd)	2024/06/22		NC	%	75 - 125
			Chromium (Cr)	2024/06/22		96	%	75 - 125
			Cobalt (Co)	2024/06/22		92	%	75 - 125
			Copper (Cu)	2024/06/22		NC	%	75 - 125
			Iron (Fe)	2024/06/22		NC	%	75 - 125
			Lead (Pb)	2024/06/22		NC	%	75 - 125
			Lithium (Li)	2024/06/22		94	%	75 - 125
			Manganese (Mn)	2024/06/22		NC	%	75 - 125
			Molybdenum (Mo)	2024/06/22		91	%	75 - 125
			Nickel (Ni)	2024/06/22		100	%	75 - 125
			Selenium (Se)	2024/06/22		NC	%	75 - 125
			Silver (Ag)	2024/06/22		28 (1)	%	75 - 125
			Strontium (Sr)	2024/06/22		NC	%	75 - 125
			Thallium (Tl)	2024/06/22		100	%	75 - 125
			Tin (Sn)	2024/06/22		29 (1)	%	75 - 125
			Uranium (U)	2024/06/22		96	%	75 - 125
			Vanadium (V)	2024/06/22		98	%	75 - 125
			Zinc (Zn)	2024/06/22		NC	%	75 - 125
9468001	MTZ	Spiked Blank	Aluminum (Al)	2024/06/22		105	%	75 - 125
			Antimony (Sb)	2024/06/22		98	%	75 - 125
			Arsenic (As)	2024/06/22		92	%	75 - 125
			Barium (Ba)	2024/06/22		96	%	75 - 125
			Beryllium (Be)	2024/06/22		88	%	75 - 125
			Boron (B)	2024/06/22		100	%	75 - 125
			Cadmium (Cd)	2024/06/22		90	%	75 - 125
			Chromium (Cr)	2024/06/22		96	%	75 - 125
			Cobalt (Co)	2024/06/22		94	%	75 - 125
			Copper (Cu)	2024/06/22		93	%	75 - 125
			Iron (Fe)	2024/06/22		92	%	75 - 125
			Lead (Pb)	2024/06/22		90	%	75 - 125
			Lithium (Li)	2024/06/22		94	%	75 - 125
			Manganese (Mn)	2024/06/22		101	%	75 - 125
			Molybdenum (Mo)	2024/06/22		86	%	75 - 125
			Nickel (Ni)	2024/06/22		97	%	75 - 125
			Selenium (Se)	2024/06/22		92	%	75 - 125
			Silver (Ag)	2024/06/22		92	%	75 - 125
			Strontium (Sr)	2024/06/22		110	%	75 - 125
			Thallium (Tl)	2024/06/22		94	%	75 - 125
			Tin (Sn)	2024/06/22		93	%	75 - 125
			Uranium (U)	2024/06/22		91	%	75 - 125
			Vanadium (V)	2024/06/22		97	%	75 - 125

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Zinc (Zn)	2024/06/22		94	%	75 - 125
9468001	MTZ	Method Blank	Aluminum (Al)	2024/06/22	<2.5		mg/kg	
			Antimony (Sb)	2024/06/22	<0.50		mg/kg	
			Arsenic (As)	2024/06/22	<0.50		mg/kg	
			Barium (Ba)	2024/06/22	<1.5		mg/kg	
			Beryllium (Be)	2024/06/22	<0.50		mg/kg	
			Boron (B)	2024/06/22	<1.5		mg/kg	
			Cadmium (Cd)	2024/06/22	<0.050		mg/kg	
			Chromium (Cr)	2024/06/22	<0.50		mg/kg	
			Cobalt (Co)	2024/06/22	<0.20		mg/kg	
			Copper (Cu)	2024/06/22	<0.50		mg/kg	
			Iron (Fe)	2024/06/22	<15		mg/kg	
			Lead (Pb)	2024/06/22	<0.18		mg/kg	
			Lithium (Li)	2024/06/22	<0.50		mg/kg	
			Manganese (Mn)	2024/06/22	<0.50		mg/kg	
			Molybdenum (Mo)	2024/06/22	<0.50		mg/kg	
			Nickel (Ni)	2024/06/22	<0.50		mg/kg	
			Selenium (Se)	2024/06/22	<0.50		mg/kg	
			Silver (Ag)	2024/06/22	<0.12		mg/kg	
			Strontium (Sr)	2024/06/22	<1.5		mg/kg	
			Thallium (Tl)	2024/06/22	<0.020		mg/kg	
			Tin (Sn)	2024/06/22	<0.50		mg/kg	
			Uranium (U)	2024/06/22	<0.020		mg/kg	
			Vanadium (V)	2024/06/22	<0.50		mg/kg	
			Zinc (Zn)	2024/06/22	<1.5		mg/kg	
9468001	MTZ	RPD [ZIJ726-01]	Aluminum (Al)	2024/06/22	8.6		%	35
			Antimony (Sb)	2024/06/22	NC		%	35
			Arsenic (As)	2024/06/22	5.8		%	35
			Barium (Ba)	2024/06/22	27		%	35
			Beryllium (Be)	2024/06/22	NC		%	35
			Boron (B)	2024/06/22	NC		%	35
			Cadmium (Cd)	2024/06/22	22		%	35
			Chromium (Cr)	2024/06/22	NC		%	35
			Cobalt (Co)	2024/06/22	7.0		%	35
			Copper (Cu)	2024/06/22	7.6		%	35
			Iron (Fe)	2024/06/22	3.1		%	35
			Lead (Pb)	2024/06/22	12		%	35
			Lithium (Li)	2024/06/22	NC		%	35
			Manganese (Mn)	2024/06/22	32		%	35
			Molybdenum (Mo)	2024/06/22	NC		%	35
			Nickel (Ni)	2024/06/22	NC		%	35
			Selenium (Se)	2024/06/22	29		%	35
			Thallium (Tl)	2024/06/22	NC		%	35
			Tin (Sn)	2024/06/22	NC		%	35
			Uranium (U)	2024/06/22	4.5		%	35
			Vanadium (V)	2024/06/22	NC		%	35
			Zinc (Zn)	2024/06/22	21		%	35
9479239	MTZ	Matrix Spike [ZIJ726-01]	Silver (Ag)	2024/06/27		93	%	75 - 125
			Strontium (Sr)	2024/06/27		NC	%	75 - 125
9479239	MTZ	Spiked Blank	Silver (Ag)	2024/06/27		92	%	75 - 125
			Strontium (Sr)	2024/06/27		94	%	75 - 125
9479239	MTZ	Method Blank	Silver (Ag)	2024/06/27	<0.12		mg/kg	
			Strontium (Sr)	2024/06/27	<1.5		mg/kg	

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Bureau Veritas Job #: C4G5585
Report Date: 2024/06/28

Dillon Consulting Limited
Client Project #: 223723
Site Location: LAKE ENON (TISSUES)
Sampler Initials: JM

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9479239	MTZ	RPD [ZIJ726-01]	Silver (Ag)	2024/06/27	19		%	35
			Strontium (Sr)	2024/06/27	22		%	35

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Matrix Spike exceeds acceptance limits, probable matrix interference.

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Client Project #: 223723
Site Location: LAKE ENON (TISSUES)
Sampler Initials: JM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Colleen Acker, B.Sc, Scientific Service Specialist

Phil Deveau, Scientific Specialist (Organics)

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