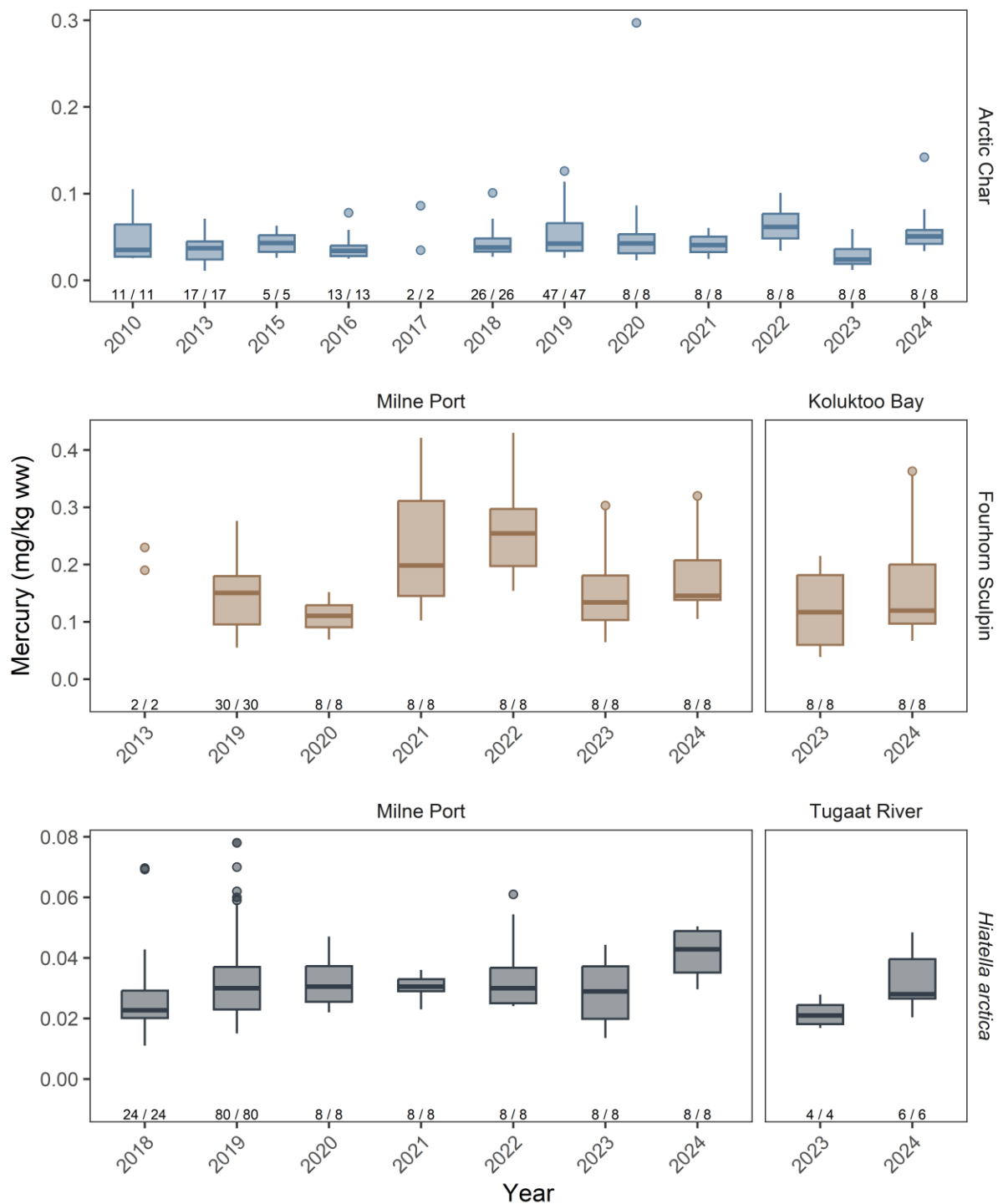


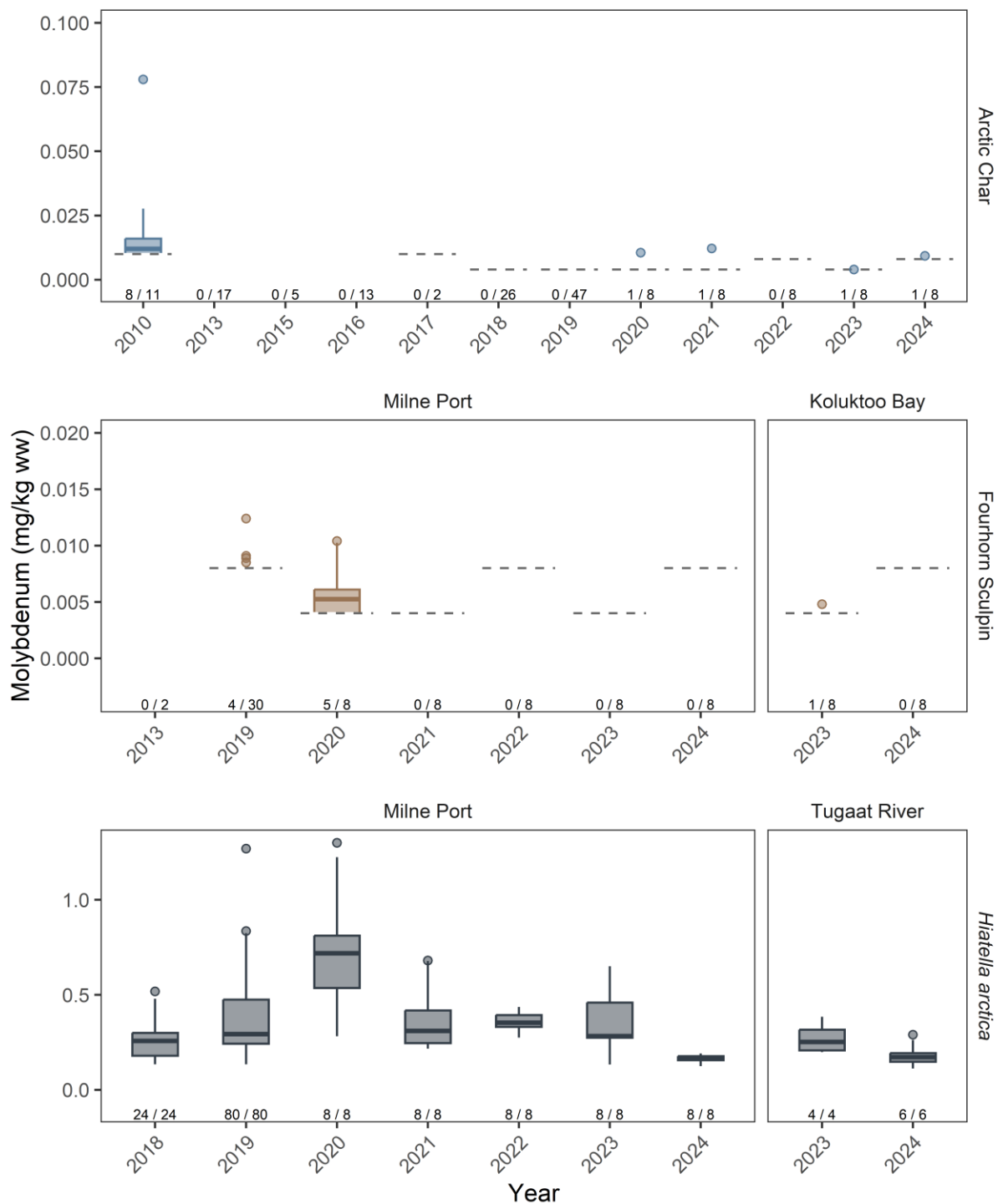
Total sample size (n) and number of samples above detection limits (n>DL) are shown above the x-axis as “n>DL/n”. Values below DL are not shown in the plots. Dashed lines indicate detection limits.

**Figure 7C-17: Concentrations of Manganese for Arctic Char, Fourhorn Sculpin and *Hiatella arctica* Tissue Sampled from the Milne Port Area and Reference Areas, 2010 to 2024**



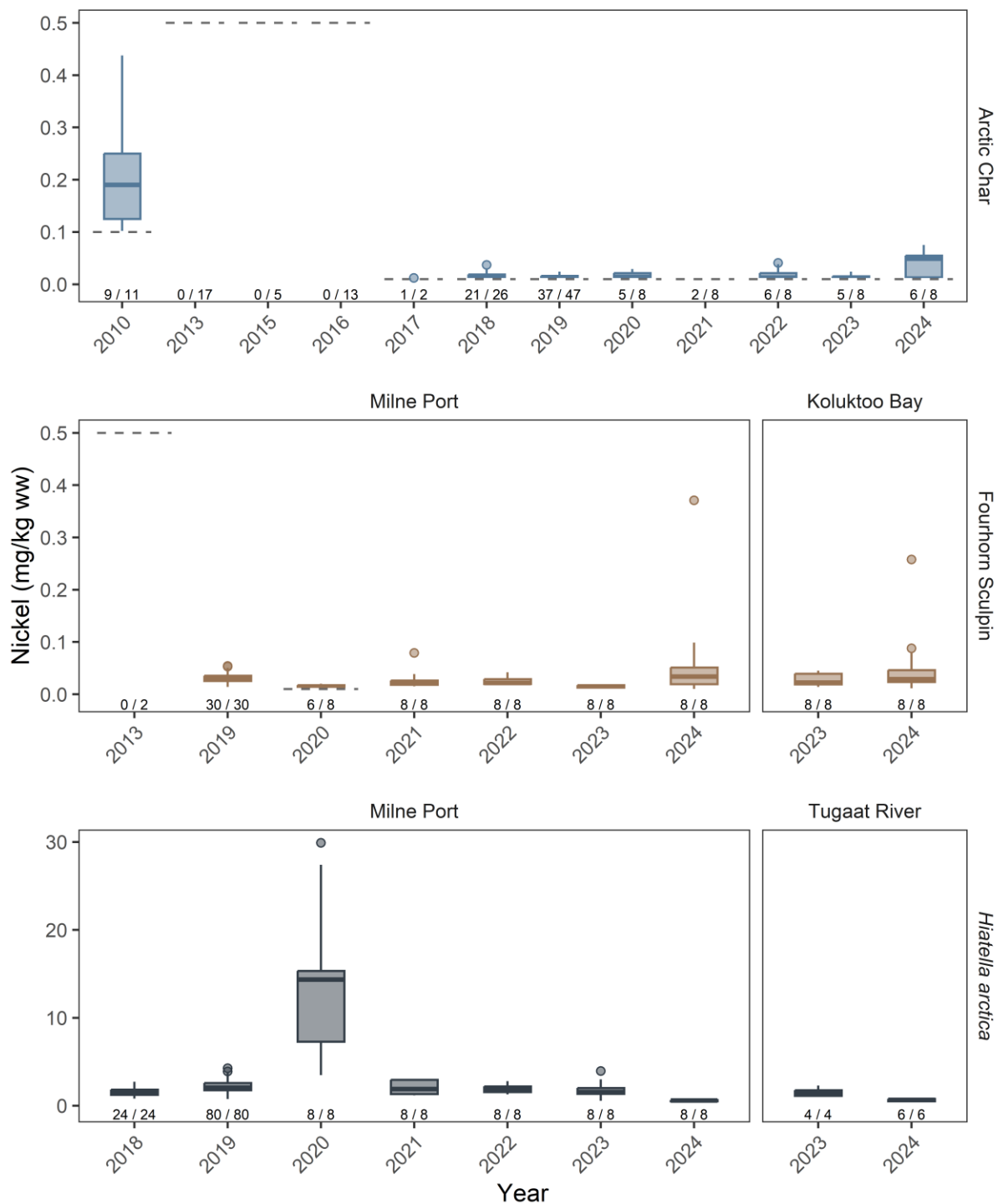
Total sample size (n) and number of samples above detection limits (n>DL) are shown above the x-axis as “n>DL/n”. Values below DL are not shown in the plots.

**Figure 7C-18: Concentrations of Mercury for Arctic Char, Fourhorn Sculpin and *Hiatella arctica* Tissue Sampled from the Milne Port Area and Reference Areas, 2010 to 2024**



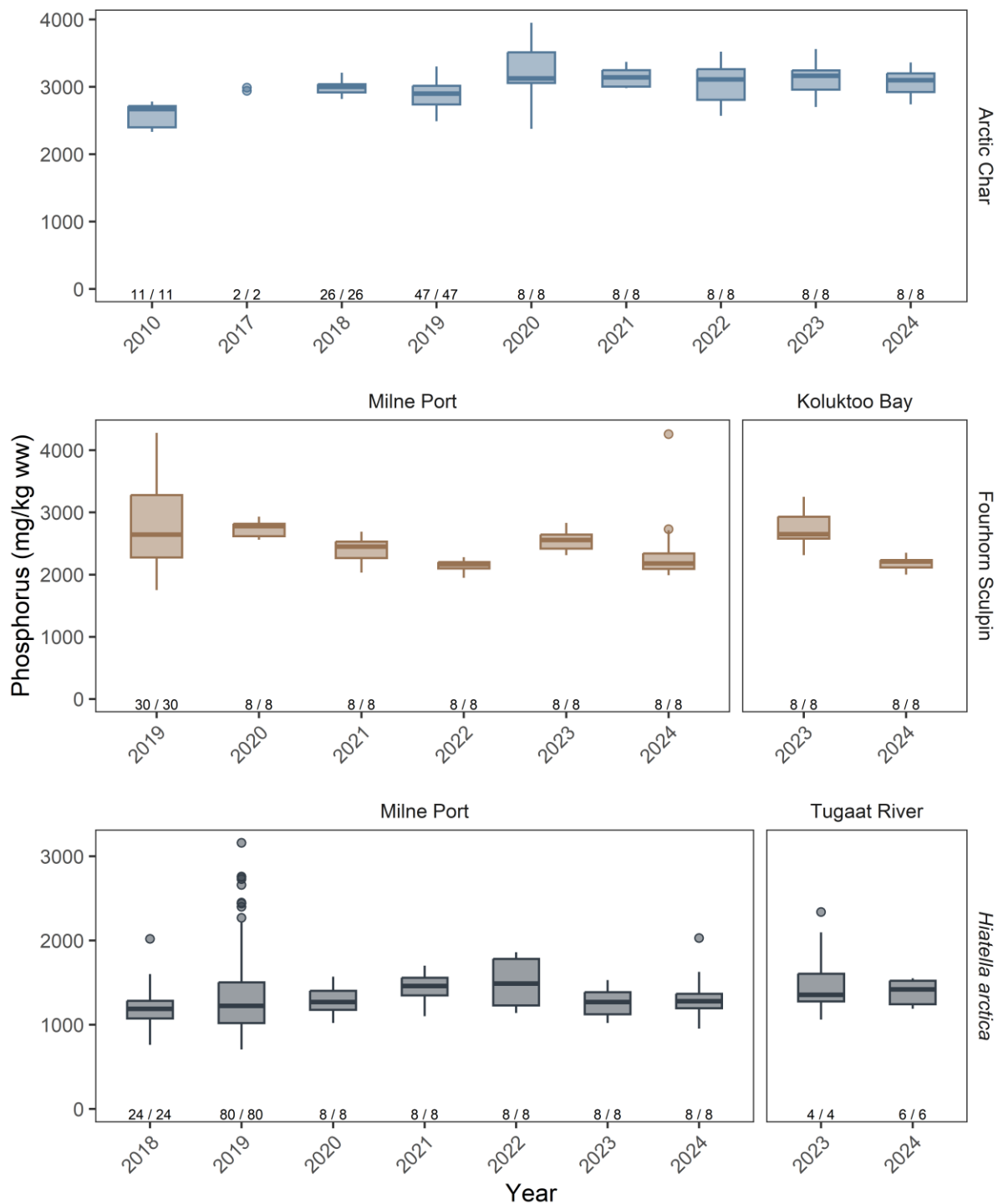
Total sample size (n) and number of samples above detection limits (n>DL) are shown above the x-axis as “n>DL/n”. Values below DL are not shown in the plots. Dashed lines indicate detection limits. Values truncated at 0.10 mg/kg ww and 0.020 mg/kg ww for Arctic Char and Fourhorn Sculpin, respectively, to improve interpretability.

**Figure 7C-19: Concentrations of Molybdenum for Arctic Char, Fourhorn Sculpin and *Hiatella arctica* Tissue Sampled from the Milne Port Area and Reference Areas, 2010 to 2024**



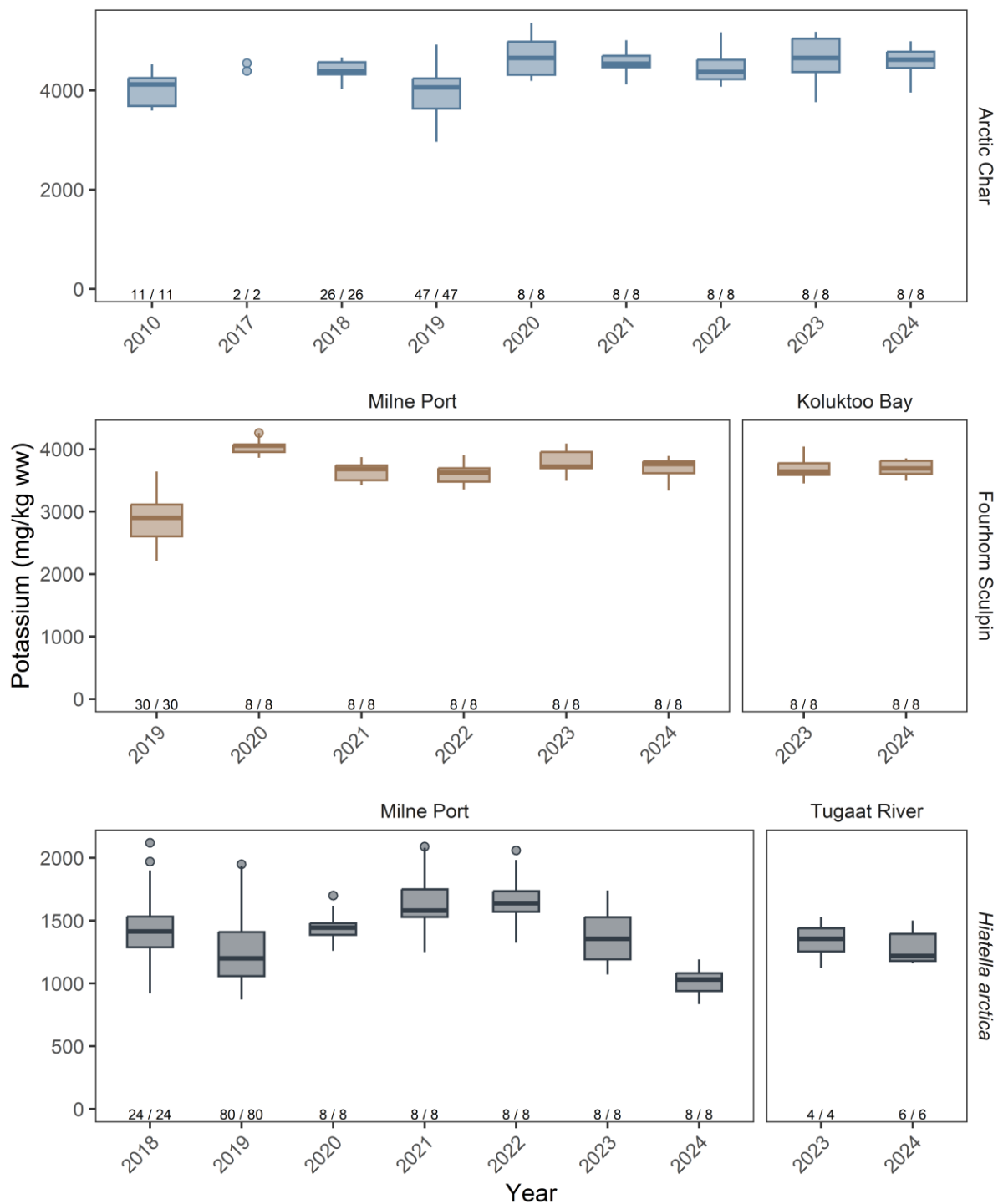
Total sample size (n) and number of samples above detection limits (n>DL) are shown above the x-axis as “n>DL/n”. Values below DL are not shown in the plots. Dashed lines indicate detection limits. Values truncated at 0.50 mg/kg ww and 0.50 mg/kg ww for Arctic Char and Fourhorn Sculpin, respectively, to improve interpretability.

**Figure 7C-20: Concentrations of Nickel for Arctic Char, Fourhorn Sculpin and *Hiatella arctica* Tissue Sampled from the Milne Port Area and Reference Areas, 2010 to 2024**



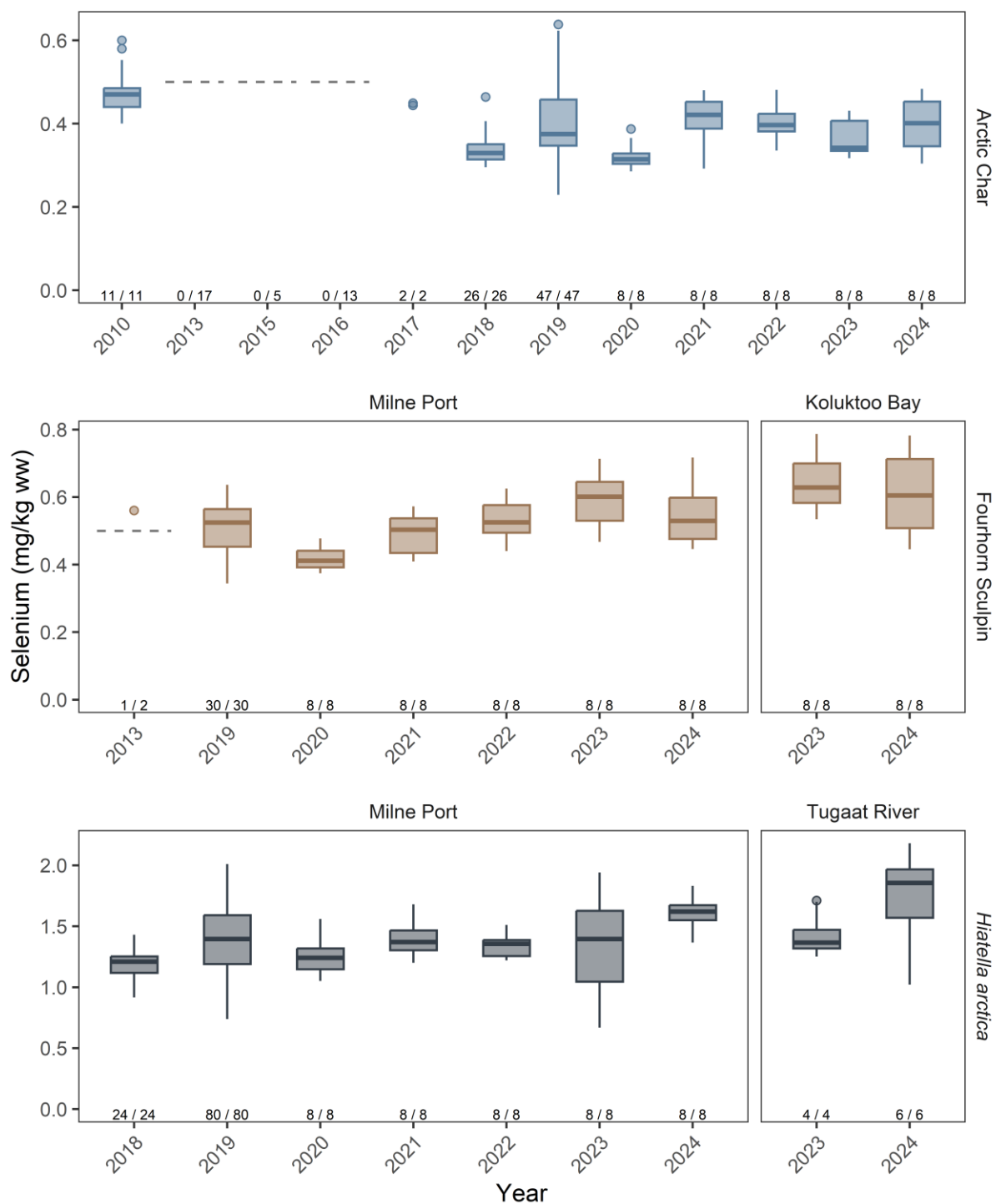
Total sample size (n) and number of samples above detection limits (n>DL) are shown above the x-axis as “n>DL/n”. Values below DL are not shown in the plots.

**Figure 7C-21: Concentrations of Phosphorus for Arctic Char, Fourhorn Sculpin and *Hiatella arctica* Tissue Sampled from the Milne Port Area and Reference Areas, 2010 to 2024**



Total sample size (n) and number of samples above detection limits (n>DL) are shown above the x-axis as “n>DL/n”. Values below DL are not shown in the plots.

**Figure 7C-22: Concentrations of Potassium for Arctic Char, Fourhorn Sculpin and *Hiatella arctica* Tissue Sampled from the Milne Port Area and Reference Areas, 2010 to 2024**

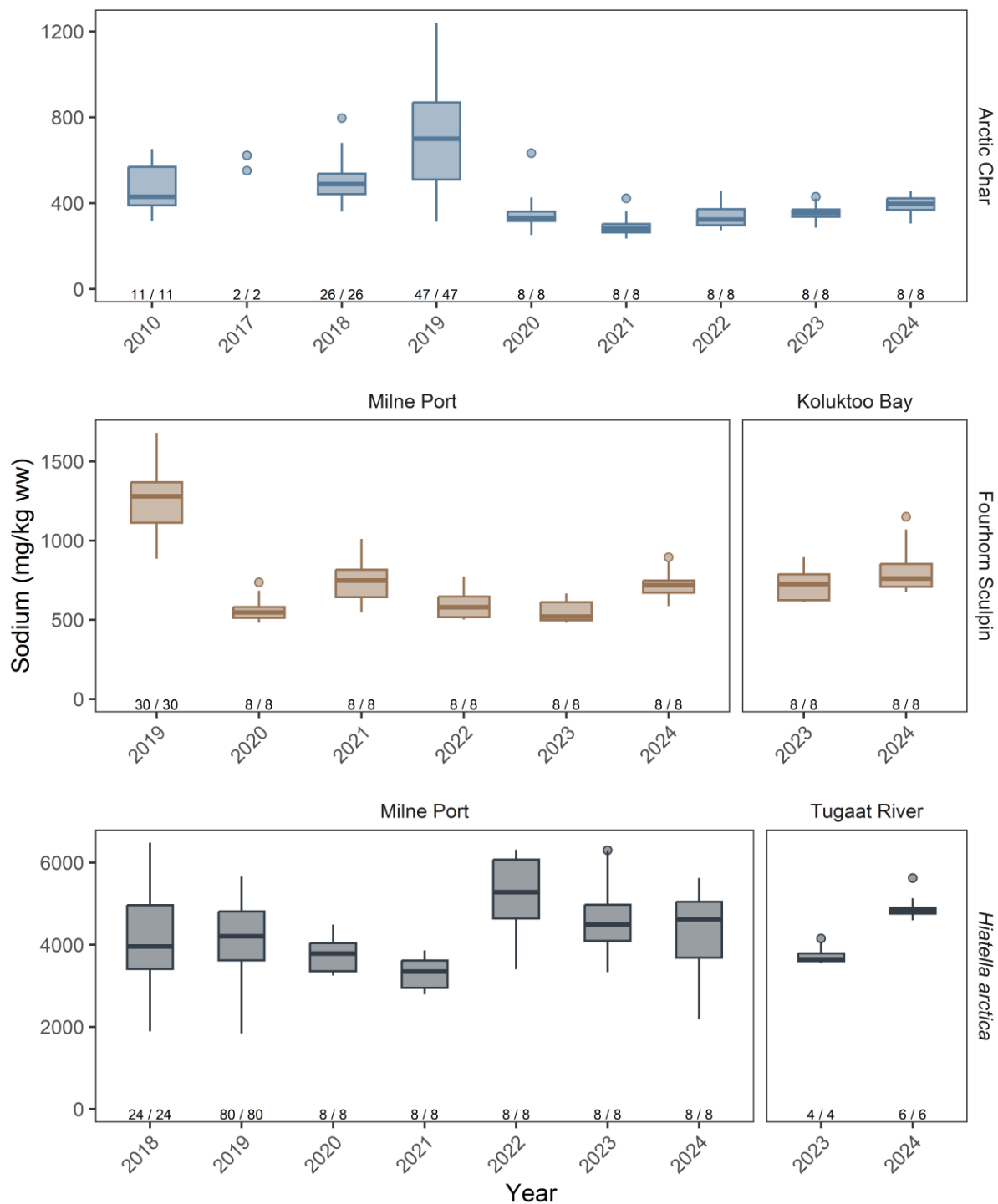


Total sample size (n) and number of samples above detection limits (n>DL) are shown above the x-axis as “n>DL/n”. Values below DL are not shown in the plots. Dashed lines indicate detection limits.

**Figure 7C-23: Concentrations of Selenium for Arctic Char, Fourhorn Sculpin and *Hiatella arctica* Tissue Sampled from the Milne Port Area and Reference Areas, 2010 to 2024**

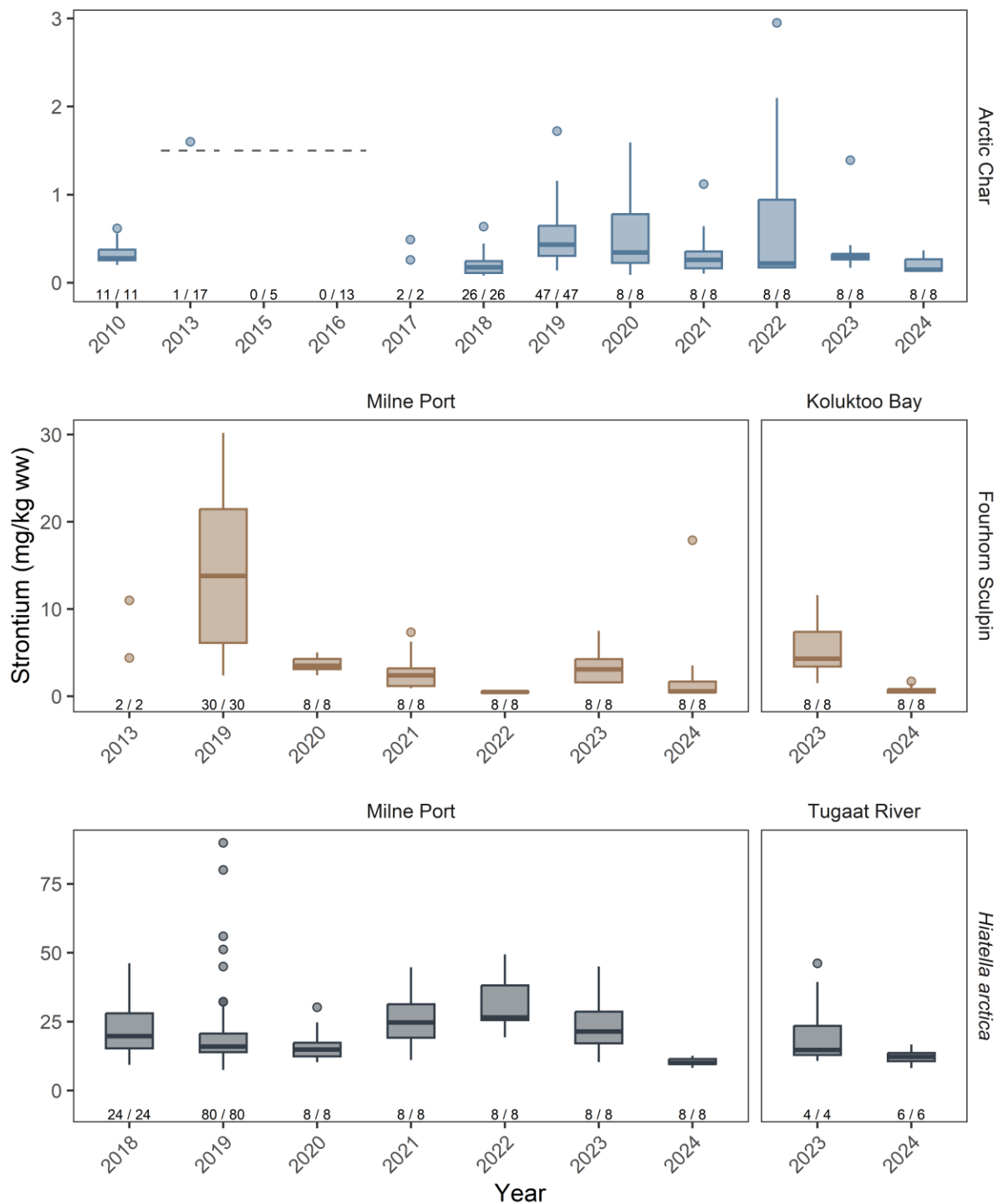






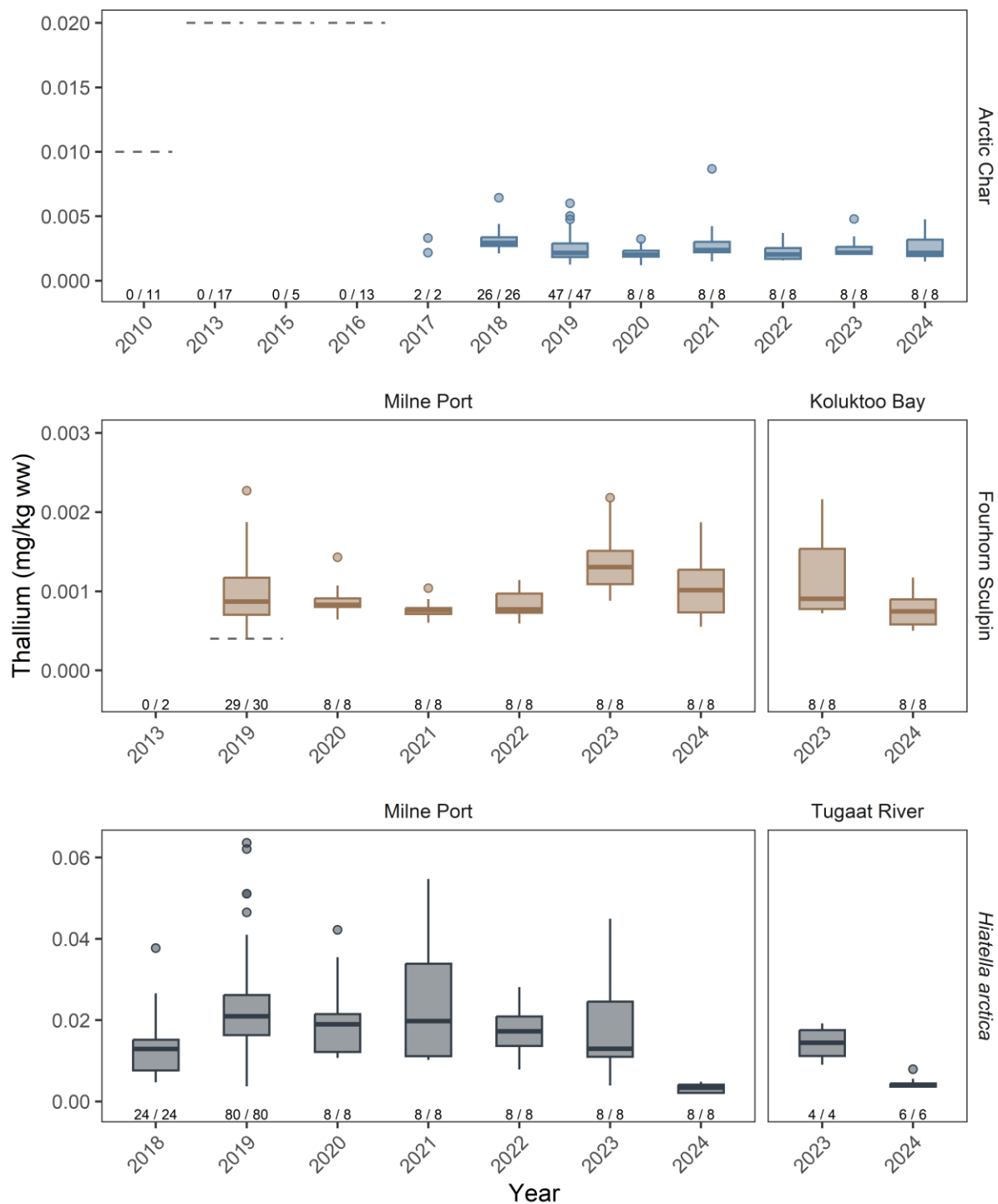
Total sample size (n) and number of samples above detection limits (n>DL) are shown above the x-axis as “n>DL/n”. Values below DL are not shown in the plots.

**Figure 7C-25: Concentrations of Sodium for Arctic Char, Fourhorn Sculpin and *Hiatella arctica* Tissue Sampled from the Milne Port Area and Reference Areas, 2010 to 2024**



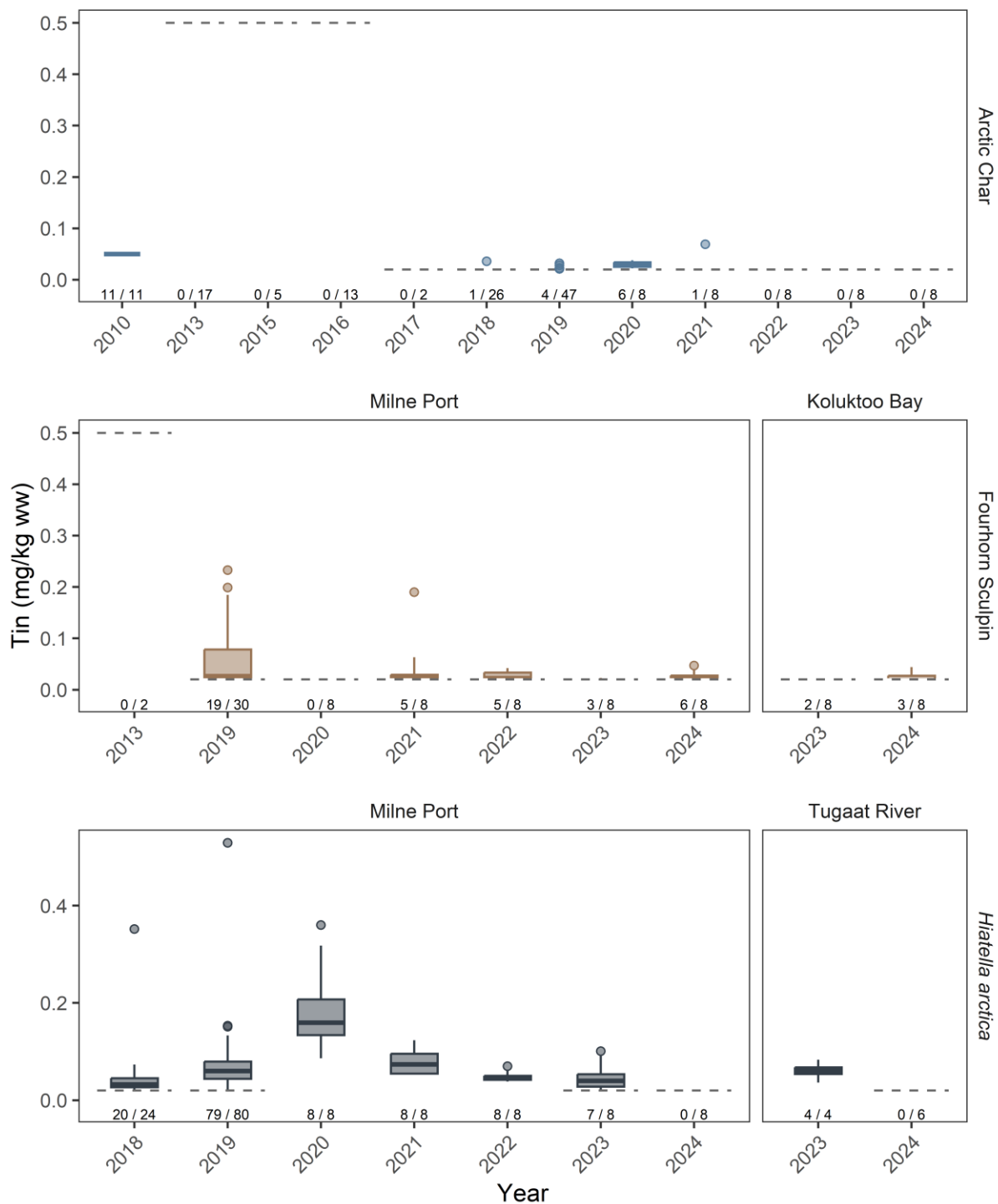
Total sample size (n) and number of samples above detection limits (n>DL) are shown above the x-axis as “n>DL/n”. Values below DL are not shown in the plots. Dashed lines indicate detection limits.

**Figure 7C-26: Concentrations of Strontium for Arctic Char, Fourhorn Sculpin and *Hiatella arctica* Tissue Sampled from the Milne Port Area and Reference Areas, 2010 to 2024**



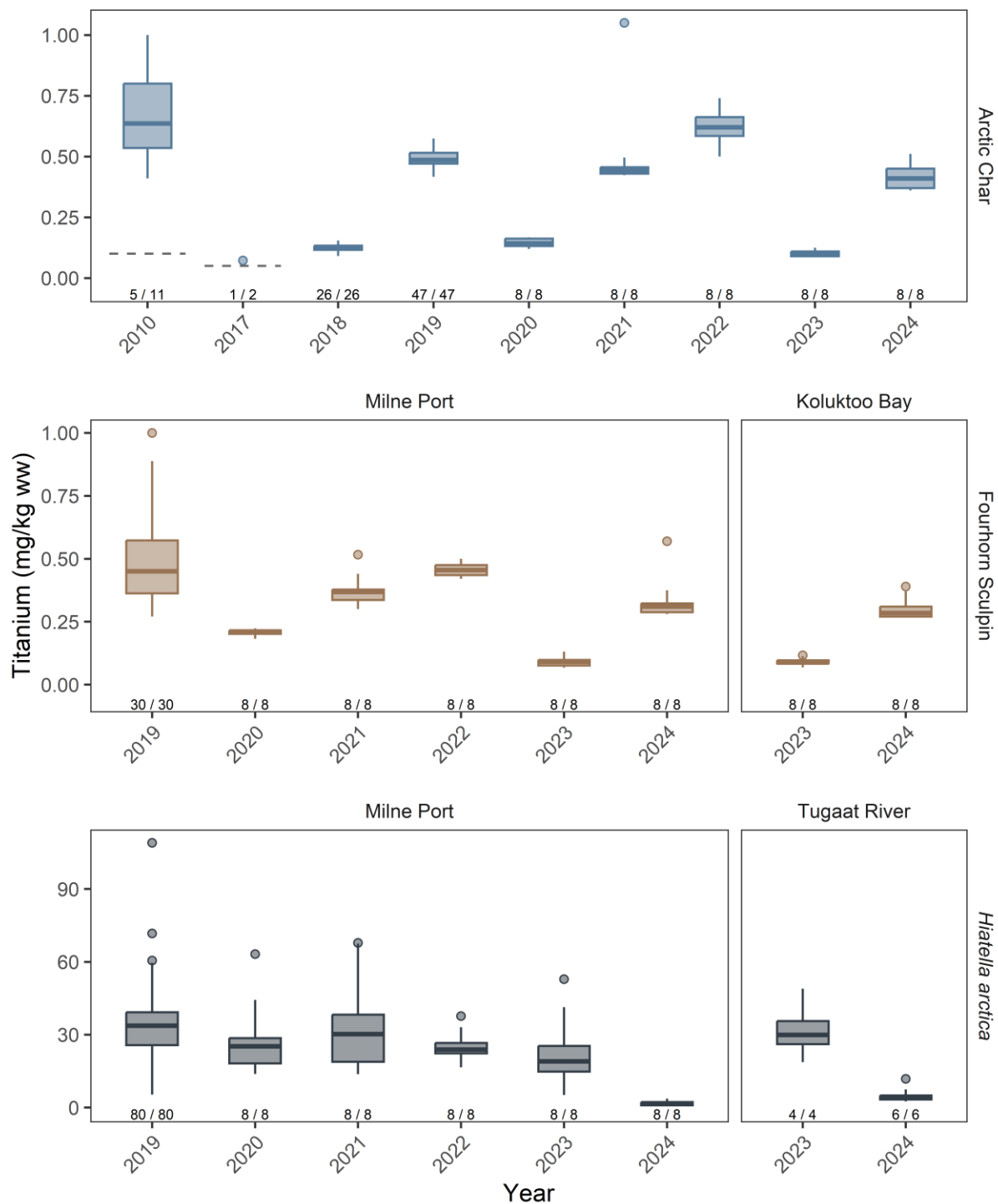
Total sample size (n) and number of samples above detection limits (n>DL) are shown above the x-axis as "n>DL/n". Values below DL are not shown in the plots. Dashed lines indicate detection limits. Values truncated at 0.020 mg/kg ww and 0.0030 mg/kg ww for Arctic Char and Fourhorn Sculpin, respectively, to improve interpretability.

**Figure 7C-27: Concentrations of Thallium for Arctic Char, Fourhorn Sculpin and *Hiatella arctica* Tissue Sampled from the Milne Port Area and Reference Areas, 2010 to 2024**



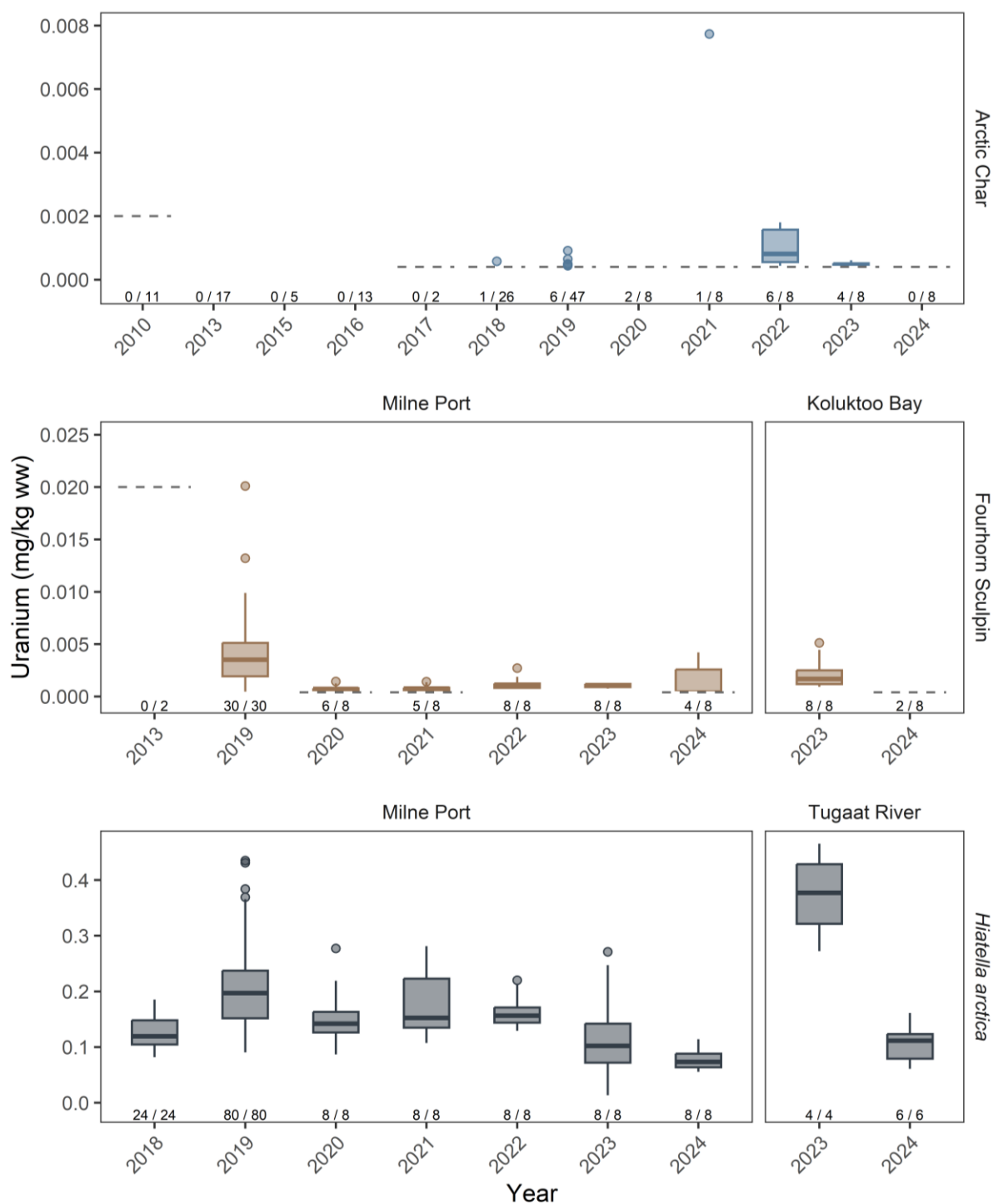
Total sample size (n) and number of samples above detection limits (n>DL) are shown above the x-axis as “n>DL/n”. Values below DL are not shown in the plots. Dashed lines indicate detection limits. Values truncated at 0.50 mg/kg ww and 0.50 mg/kg ww for Arctic Char and Fourhorn Sculpin, respectively, to improve interpretability.

**Figure 7C-28: Concentrations of Tin for Arctic Char, Fourhorn Sculpin and *Hiatella arctica* Tissue Sampled from the Milne Port Area and Reference Areas, 2010 to 2024**



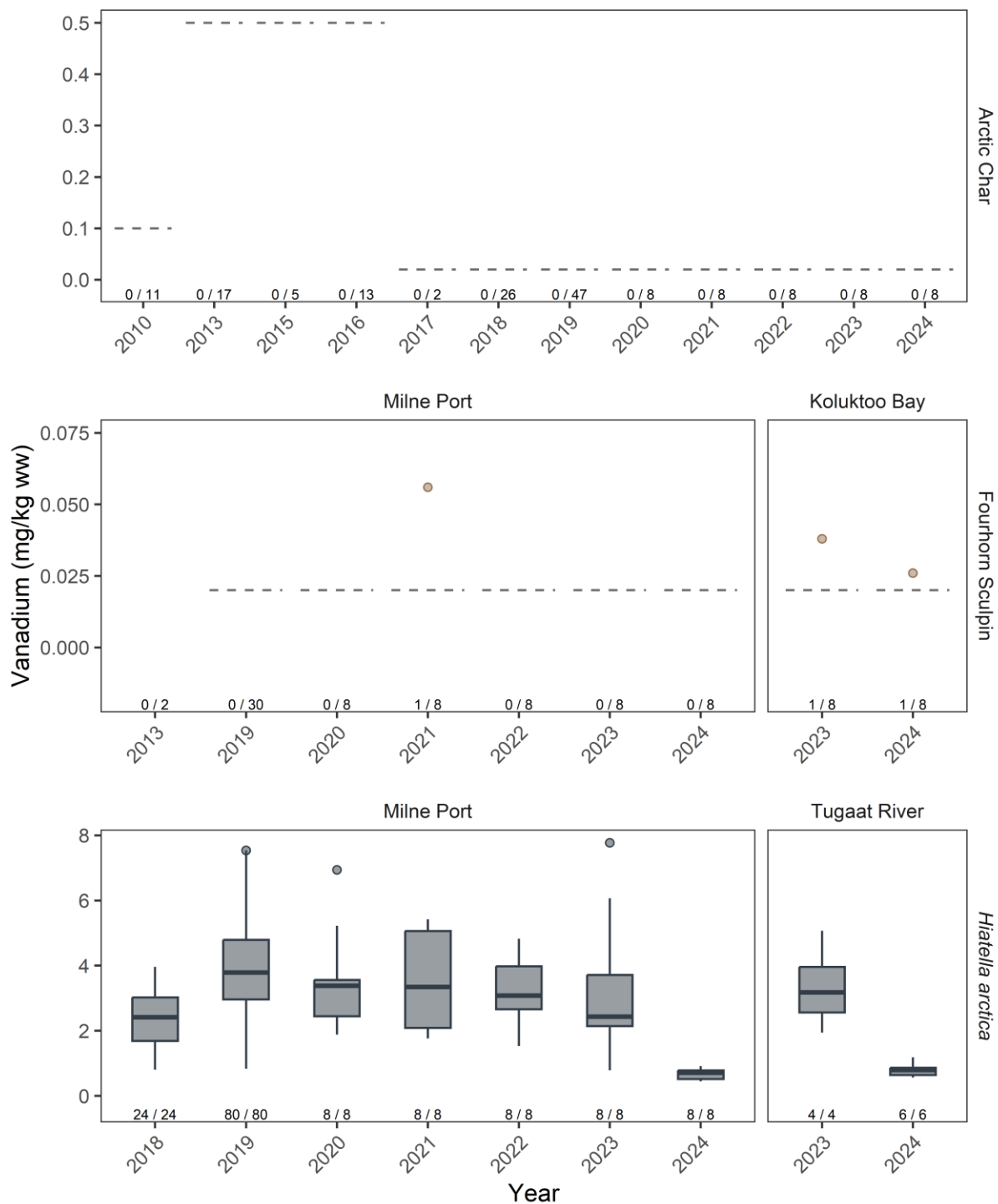
Total sample size (n) and number of samples above detection limits (n>DL) are shown above the x-axis as “n>DL/n”. Values below DL are not shown in the plots. Dashed lines indicate detection limits.

**Figure 7C-29: Concentrations of Titanium for Arctic Char, Fourhorn Sculpin and *Hiatella arctica* Tissue Sampled from the Milne Port Area and Reference Areas, 2010 to 2024**



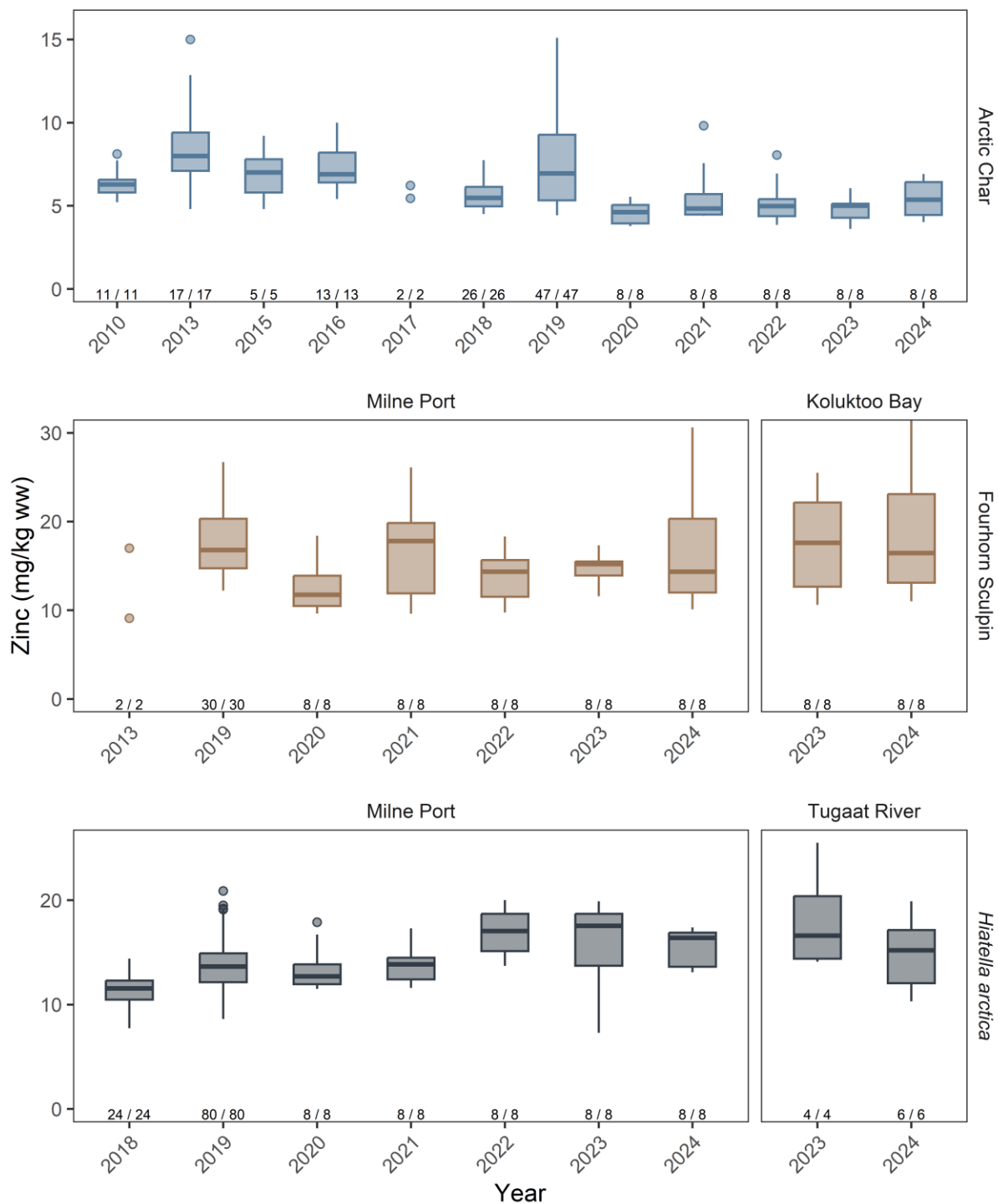
Total sample size (n) and number of samples above detection limits (n>DL) are shown above the x-axis as “n>DL/n”. Values below DL are not shown in the plots. Dashed lines indicate detection limits. Values truncated at 0.0080 mg/kg ww and 0.025 mg/kg ww for Arctic Char and Fourhorn Sculpin, respectively, to improve interpretability.

**Figure 7C-30: Concentrations of Uranium for Arctic Char, Fourhorn Sculpin and *Hiatella arctica* Tissue Sampled from the Milne Port Area and Reference Areas, 2010 to 2024**



Total sample size (n) and number of samples above detection limits (n>DL) are shown above the x-axis as “n>DL/n”. Values below DL are not shown in the plots. Dashed lines indicate detection limits. Values truncated at 0.050 mg/kg ww and 0.075 mg/kg ww for Arctic Char and Fourhorn Sculpin, respectively, to improve interpretability.

**Figure 7C-31: Concentrations of Vanadium for *Hiatella arctica* Tissue Sampled from the Milne Port Area and Reference Areas, 2010 to 2024**



Total sample size (n) and number of samples above detection limits (n>DL) are shown above the x-axis as “n>DL/n”. Values below DL are not shown in the plots. Values truncated at 16 mg/kg ww and 30 mg/kg ww for Arctic Char and Fourhorn Sculpin, respectively, to improve interpretability.

**Figure 7C-32: Concentrations of Zinc for Arctic Char, Fourhorn Sculpin and *Hiatella arctica* Tissue Sampled from the Milne Port Area and Reference Areas, 2010 to 2024**



**APPENDIX 7D**

**Reference Area Supporting  
Environmental Data**

Table 7D-1: Results of Water Quality Assessment, Reference Areas, 2024

				Station		Kukukto Bay		Tugatai River Estuary		Blank			
				Sample Name	KLK-Ref-1	DUP-F	TGT-Ref-1	Ref-1					
				Sample Date	09-Aug-2024	09-Aug-2024	09-Aug-2024	09-Aug-2024					
				FIELD_SDG	YL2401157-002	YL2401157-004	YL2401157-003	YL2401157-001					
Parameter	CCME AQUATIC LIFE MARINE WATER - LONG TERM	CCME AQUATIC LIFE MARINE WATER - SHORT TERM	Unit							Mean	Relative Percent Difference		
Field + Physical													
Alkalinity, total (as CaCO3)	-	-	mg/L		95.5	95.5	104	<1.0		95.5	0%		
Conductivity	-	-	µS/cm		37600	37400	42500	2.0		37500	1%		
Hardness (as CaCO3), dissolved	-	-	mg/L		4960	4860	5330	<1.00		4910	2%		
Hardness (as CaCO3), from total Ca/Mg	-	-	mg/L		4920	4890	5460	<1.00		4905	1%		
Solids, total dissolved [TDS]	-	-	mg/L		35700	35500	40000	<10		35600	1%		
Solids, total suspended [TSS]	-	-	mg/L		<2.0	<2.0	<2.0	<2.0		NC	NC		
Turbidity	-	-	NTU		0.28	0.30	0.11	<0.10		0.29	7%		
pH	7.0 - 8.7	-	pH units		8.02	8.00	8.01	5.54		8.01	0%		
Salinity	-	-	psu		24.8	24.6	28.4	<1.0		24.7	1%		
Anions + Nutrients													
Ammonia, total (as N)	-	-	mg/L		<0.0050	<0.0050	<0.0050	<0.0050		NC	NC		
Bromide	-	-	mg/L		45.4	46.2	52.8	<5.0		45.8	2%		
Chloride	-	-	mg/L		13500	13800	15600	<50		13650	2%		
Fluoride	-	-	mg/L		0.72	0.73	0.78	<0.20		0.725	1%		
Kjeldahl nitrogen, total [TKN]	-	-	mg/L		<0.100	0.107	0.112	<0.050		NC	NC		
Nitrate (as N)	339	45	mg/L		<0.010	<0.010	<0.010	<0.010		NC	NC		
Nitrite (as N)	-	-	mg/L		<0.010	<0.010	<0.010	<0.010		NC	NC		
Phosphorus, total	-	-	mg/L		0.0170	0.0185	0.0202	<0.0020		0.01775	8%		
Phosphorus, total dissolved	-	-	mg/L		0.0159	0.0157	0.0187	<0.0020		0.0158	1%		
Sulfate (as SO4)	-	-	mg/L		1910	1910	2150	<3.0		1910	0%		
Carbon													
Carbon, dissolved organic [DOC]	-	-	mg/L		0.96	0.87	1.00	<0.50		0.915	10%		
Carbon, total organic [TOC]	-	-	mg/L		0.82	0.82	0.79	<0.50		0.82	0%		
Metals, Total													
Aluminum	-	-	mg/L		0.0096	0.0111	0.0111	<0.0050		0.01035	14%		
Antimony	-	-	mg/L		<0.0010	<0.0010	<0.0010	<0.0010		NC	NC		
Arsenic	0.0125	-	mg/L		0.00359	0.00388	0.00401	<0.0040		0.003735	8%		
Barium	-	-	mg/L		0.0085	0.0089	0.0082	<0.0010		0.0087	5%		
Beryllium	-	-	mg/L		<0.00050	<0.00050	<0.00050	<0.00050		NC	NC		
Bismuth	-	-	mg/L		<0.00050	<0.00050	<0.00050	<0.00050		NC	NC		
Boron	-	-	mg/L		3.34	3.44	3.66	<0.30		3.39	3%		
Cadmium	0.00012	-	mg/L		0.000021	0.000021	0.000036	<0.000020		0.000021	0%		
Calcium	-	-	mg/L		323	331	357	<1.0		327	2%		
Cesium	-	-	mg/L		<0.00050	<0.00050	<0.00050	<0.00050		NC	NC		
Chromium	0.0015 (VI)	-	mg/L		<0.00050	0.00060	<0.00050	<0.00050		NC	NC		
Cobalt	-	-	mg/L		0.000061	0.000070	0.000067	<0.000050		0.0000655	14%		
Copper	-	-	mg/L		0.00029	0.00302	0.0122	<0.00050		0.006155	102%		
Gallium	-	-	mg/L		<0.00050	<0.00050	<0.00050	<0.00050		NC	NC		
Iron	-	-	mg/L		0.012	0.016	0.012	<0.010		0.014	29%		
Lead	-	-	mg/L		<0.00010	<0.00010	<0.00010	<0.00010		NC	NC		
Lithium	-	-	mg/L		0.144	0.148	0.157	<0.020		0.146	3%		
Magnesium	-	-	mg/L		1000	986	1110	<1.0		993	1%		
Manganese	-	-	mg/L		0.00095	0.00110	0.00081	<0.00020		0.001025	15%		
Mercury	0.000016	-	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050		NC	NC		
Molybdenum	-	-	mg/L		0.00809	0.00853	0.00867	<0.00010		0.00831	5%		
Nickel	-	-	mg/L		<0.00050	0.00063	<0.00050	<0.00050		NC	NC		
Phosphorus	-	-	mg/L		<0.050	<0.050	<0.050	<0.050		NC	NC		
Potassium	-	-	mg/L		287	298	320	<1.0		292.5	4%		
Rhenium	-	-	mg/L		<0.00050	<0.00050	<0.00050	<0.00050		NC	NC		
Rubidium	-	-	mg/L		0.0805	0.0873	0.0896	<0.0050		0.0839	8%		
Selenium	-	-	mg/L		<0.00050	<0.00050	<0.00050	<0.00050		NC	NC		
Silicon	-	-	mg/L		<1.0	<1.0	<1.0	<1.0		NC	NC		
Silver	-	0.0075	mg/L		<0.00010	<0.00010	<0.00010	<0.00010		NC	NC		
Sodium	-	-	mg/L		7600	7750	8360	<2.5		7675	2%		
Strontium	-	-	mg/L		5.47	5.97	6.14	<0.010		5.72	9%		
Sulphur (Colloidal)	-	-	mg/L		704	743	787	<5.0		723.5	5%		
Tellurium	-	-	mg/L		<0.00050	<0.00050	<0.00050	<0.00050		NC	NC		
Thallium	-	-	mg/L		<0.000050	<0.000050	<0.000050	<0.000050		NC	NC		
Thorium-232	-	-	mg/L		<0.00050	<0.00050	<0.00050	<0.00050		NC	NC		
Tin	-	-	mg/L		<0.0010	<0.0010	<0.0010	<0.0010		NC	NC		
Titanium	-	-	mg/L		<0.0050	<0.0050	<0.0050	<0.0050		NC	NC		
Tungsten	-	-	mg/L		<0.0010	<0.0010	<0.0010	<0.0010		NC	NC		
Uranium	-	-	mg/L		0.00246	0.00243	0.00268	<0.00050		0.002445	1%		
Vanadium	-	-	mg/L		0.00093	0.00095	0.00105	<0.00050		0.00094	2%		
Yttrium	-	-	mg/L		<0.00050	<0.00050	<0.00050	<0.00050		NC	NC		
Zinc	-	-	mg/L		<0.0030	<0.0030	<0.0030	<0.0030		NC	NC		
Zirconium	-	-	mg/L		<0.00050	<0.00050	<0.00050	<0.00050		NC	NC		
Metals, Dissolved													
Aluminum	-	-	mg/L		<0.0050	<0.0050	0.0061	<0.0050		NC	NC		
Antimony	-	-	mg/L		<0.0010	<0.0010	<0.0010	<0.0010		NC	NC		
Arsenic	0.0125	-	mg/L		0.00289	0.00301	0.00325	<0.0040		0.00295	4%		
Barium	-	-	mg/L		0.0087	0.0086	0.0084	<0.0010		0.00865	1%		
Beryllium	-	-	mg/L		<0.00050	<0.00050	<0.00050	<0.00050		NC	NC		
Bismuth	-	-	mg/L		<0.00050	<0.00050	<0.00050	<0.00050		NC	NC		
Boron	-	-	mg/L		3.51	3.56	3.88	<0.30		3.535	1%		
Cadmium	0.00012	-	mg/L		<0.000020	0.000022	0.000038	<0.000020		NC	NC		
Calcium	-	-	mg/L		320	325	352	<1.0		322.5	2%		
Cesium	-	-	mg/L		<0.00050	<0.00050	<0.00050	<0.00050		NC	NC		
Chromium	-	-	mg/L		<0.00050	<0.00050	<0.00050	<0.00050		NC	NC		
Cobalt	-	-	mg/L		<0.000050	0.000061	0.000081	<0.000050		NC	NC		
Copper	-	-	mg/L		<0.00050	<0.00050	0.00160	<0.00050		NC	NC		
Gallium	-	-	mg/L		<0.00050	<0.00050	<0.00050	<0.00050		NC	NC		
Iron	-	-	mg/L		<0.010	<0.010	<0.010	<0.010		NC	NC		
Lead	-	-	mg/L		<0.00010	<0.00010	0.00175	<0.00010		NC	NC		
Lithium	-	-	mg/L		0.142	0.136	0.155	<0.020		0.139	4%		
Magnesium	-	-	mg/L		1010	983	1080	<1.0		996.5	3%		
Manganese	-	-	mg/L		0.00062	0.00059	0.00104	<0.00010		0.000605	5%		
Mercury	0.000016	-	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050		NC	NC		
Molybdenum	-	-	mg/L		0.00734	0.00705	0.00780	<0.00010		0.007195	4%		
Nickel	-	-	mg/L		<0.00050	<0.00050	<0.00050	<0.00050		NC	NC		
Phosphorus	-	-	mg/L		<0.050	<0.050	<0.050	<0.050		NC	NC		
Potassium	-	-	mg/L		288	288	315	<1.0		288	0%		
Rhenium	-	-	mg/L		<0.00050	<0.00050	<0.00050	<0.00050		NC	NC		
Rubidium	-	-	mg/L		0.0744	0.0737	0.0816	<0.0050		0.07405	1%		
Selenium	-	-	mg/L		<0.00050	0.00062	0.00072	<0.00050		NC	NC		
Silicon	-	-	mg/L		<1.0	<1.0	<1.0	<1.0		NC	NC		
Silver	-	0.0075	mg/L		<0.00010	<0.00010	<0.00010	<0.00010		NC	NC		
Sodium	-	-	mg/L		7170	7520	7840	<2.5		7345	5%		
Strontium	-	-	mg/L		5.05	4.99	5.51	<0.010		5.02	1%		
Sulphur (Colloidal)	-	-	mg/L		690	678	758	<5.0		684	2%		
Tellurium	-	-	mg/L		<0.00050	<0.00050	<0.00050	<0.00050		NC	NC		
Thallium	-	-	mg/L		<0.000050	<0.000050	<0.000050	<0.000050		NC	NC		
Thorium-232	-	-	mg/L		<0.00050	<0.00050	<0.00050	<0.00050</					

Table 7D-2: Results of Sediment Quality Assessment, Reference Areas, 2024

Sample ID  Date Sampled Time Sampled  Laboratory Sample ID  QA/QC Parent Sample ID	Lowest Detection Limits	Units	CCME <sup>1</sup>		NOAA Sediment Benchmarks								Eco Tox EqP( $\otimes$ 1% TOC)	TGT-Ref-1-SG	KLK-Ref-1-SG	DUPA-SG	Mean	Relative Percent Difference
			ISQG	PEL	T <sub>20</sub>	TEL	ERL	T <sub>50</sub>	PEL	ERM	AET	09-Aug-2024 12:00		09-Aug-2024 10:00	09-Aug-2024 00:00			
												YL2401152-001 / VA24C1763-010		YL2401152-002 / VA24C1763-011	YL2401152-003 / VA24C1763-012			
												FDA		FD	KLK-Ref-1-SG			
Physical Parameters																		
Moisture	0.25	%	-	-	-	-	-	-	-	-	-	27.7	28	21.8	24.9	25%		
pH (1:2 soil:water)	0.1	pH units	-	-	-	-	-	-	-	-	-	8.57	8.62	8.51	8.565	1%		
Particle Size																		
Clay (<0.004mm)	1	%	-	-	-	-	-	-	-	-	-	1.9	4.2	4.8	4.5	NA		
Silt (0.063mm - 0.004mm)	1	%	-	-	-	-	-	-	-	-	-	6.8	9.9	10.2	10.05	3%		
Sand (2.0mm - 0.063mm)	1	%	-	-	-	-	-	-	-	-	-	91.3	75.3	78	76.65	4%		
Gravel (>2mm)	1	%	-	-	-	-	-	-	-	-	-	<1.0	10.6	7	8.8	41%		
Organic / Inorganic Carbon																		
Inorganic Carbon	0.05	%	-	-	-	-	-	-	-	-	-	0.107	2.33	2.29	2.31	2%		
Total Carbon	0.05	%	-	-	-	-	-	-	-	-	-	0.355	3.32	3.28	3.3	1%		
Total Organic Carbon	0.06	%	-	-	-	-	-	-	-	-	-	0.248	0.99	0.99	0.99	0%		
Inorganic Carbon (as CaCO3 equivalent)	0.4	%	-	-	-	-	-	-	-	-	-	0.89	19.4	19.1	19.25	2%		
Organic Matter	0.1	%	-	-	-	-	-	-	-	-	-	0.43	1.71	1.71	1.71	0%		
Metals																		
Aluminum	50	mg/kg	-	-	-	-	-	-	-	-	18000	-	5390	6790	6710	6750	1%	
Antimony	0.1	mg/kg	-	-	0.63	-	-	2.4	-	-	9.3	-	<0.10	<0.10	<0.10	NC	NC	
Arsenic	0.1	mg/kg	7.24	41.6	7.4	7.24	8.2	20	41.6	70	35	-	1.6	3.8	3.44	3.62	10%	
Barium	0.5	mg/kg	-	-	-	130.1	-	-	-	-	48	-	16.6	36.1	48.7	42.4	30%	
Beryllium	0.1	mg/kg	-	-	-	-	-	-	-	-	-	-	0.4	0.34	0.34	0.34	NA	
Bismuth	0.2	mg/kg	-	-	-	-	-	-	-	-	-	-	<0.20	<0.20	<0.20	NC	NC	
Boron	5	mg/kg	-	-	-	-	-	-	-	-	-	-	7.6	26	27.4	26.7	5%	
Cadmium	0.02	mg/kg	0.7	4.2	0.38	0.68	1.2	1.4	4.21	9.6	3	-	<0.020	0.054	0.067	0.0605	NA	
Calcium	50	mg/kg	-	-	-	-	-	-	-	-	-	-	3500	60300	62400	61350	3%	
Chromium	0.5	mg/kg	52.3	160	49	52.3	81	141	160	370	62	-	12.2	16.5	16.6	16.55	1%	
Cobalt	0.1	mg/kg	-	-	-	-	-	-	-	-	10	-	3.29	3.53	3.25	3.39	8%	
Copper	0.5	mg/kg	18.7	108	32	18.7	34	94	108	270	390	-	5.04	4.69	5.42	5.055	14%	
Iron	50	mg/kg	-	-	-	-	-	-	-	-	220000	-	10700	11900	11800	11850	1%	
Lead	0.5	mg/kg	30.2	112	30	30.24	46.7	94	112	218	400	-	3.49	5.56	5.8	5.68	4%	
Lithium	2	mg/kg	-	-	-	-	-	-	-	-	-	-	11.4	16.8	16.2	16.5	4%	
Magnesium	20	mg/kg	-	-	-	-	-	-	-	-	-	-	6530	16400	16600	16500	1%	
Manganese	1	mg/kg	-	-	-	-	-	-	-	-	260	-	84.3	104	97.7	100.85	6%	
Mercury	0.005	mg/kg	0.13	0.7	0.14	0.13	0.15	0.48	0.7	0.71	0.41	-	<0.0050	0.0099	0.0113	0.0106	NA	
Molybdenum	0.1	mg/kg	-	-	-	-	-	-	-	-	-	-	0.21	0.23	0.22	0.225	NA	
Nickel	0.5	mg/kg	30 <sup>(d)</sup>	50 <sup>(d)</sup>	15	15.9	20.9	47	42.8	51.6	110	-	7.51	11.3	10.9	11.1	4%	
Phosphorus	50	mg/kg	-	-	-	-	-	-	-	-	-	-	407	354	342	348	3%	
Potassium	100	mg/kg	-	-	-	-	-	-	-	-	-	-	1200	1740	1800	1770	3%	
Selenium	0.2	mg/kg	-	-	-	-	-	-	-	-	1	-	<0.20	<0.20	0.2	NC	NC	
Silver	0.1	mg/kg	1 <sup>(e)</sup>	2.2 <sup>(d)</sup>	0.23	0.73	1	1.1	1.77	3.7	3.1	-	<0.10	<0.10	<0.10	NC	NC	
Sodium	50	mg/kg	-	-	-	-	-	-	-	-	-	-	2810	3500	3210	3355	9%	
Strontium	0.5	mg/kg	-	-	-	-	-	-	-	-	-	-	8.26	58.8	56	57.4	5%	
Sulfur	1000	mg/kg	-	-	-	-	-	-	-	-	-	-	<1000	<1000	<1000	NC	NC	
Thallium	0.05	mg/kg	-	-	-	-	-	-	-	-	-	-	0.06	0.097	0.092	0.0945	NA	
Tin	2	mg/kg	-	-	-	0.048	-	-	-	-	3.4	-	<2.0	<2.0	<2.0	NC	NC	
Titanium	1	mg/kg	-	-	-	-	-	-	-	-	-	-	206	90.8	107	98.9	16%	
Tungsten	0.5	mg/kg	-	-	-	-	-	-	-	-	-	-	<0.50	<0.50	<0.50	NC	NC	
Uranium	0.05	mg/kg	-	-	-	-	-	-	-	-	-	-	1.48	0.612	0.513	0.5625	18%	
Vanadium	0.2	mg/kg	-	-	-	-	-	-	-	-	57	-	14.1	15.2	16.2	15.7	6%	
Zinc	2	mg/kg	124	271	94	124	150	245	271	410	410	-	17.7	19.6	19.3	19.45	2%	
Zirconium	1	mg/kg	-	-	-	-	-	-	-	-	-	-	4.5	2.5	2.8	2.65	NA	
BTEX																		
Benzene	0.005	mg/kg	-	-	-	-	-	-	-	-	-	0.06	<0.0050	<0.0050	<0.0050	NC	NC	
Ethylbenzene	0.015	mg/kg	-	-	-	-	-	-	-	-	0.004	-	<0.015	<0.015	<0.015	NC	NC	
Toluene	0.05	mg/kg	-	-	-	-	-	-	-	-	-	0.67	<0.050	<0.050	<0.050	NC	NC	
Styrene	0.05	mg/kg	-	-	-	-	-	-	-	-	-	-	<0.050	<0.050	<0.050	NC	NC	
Xylene, m+p-	0.05	mg/kg	-	-	-	-	-	-	-	-	-	0.025	<0.050	<0.050	<0.050	NC	NC	
Xylene, o-	0.05	mg/kg	-	-	-	-	-	-	-	-	-	-	<0.050	<0.050	<0.050	NC	NC	
Xylenes, total	0.075	mg/kg	-	-	-	-	-	-	-	-	0.004	-	<0.075	<0.075	<0.075	NC	NC	
Methyl-tert-butyl ether [MTBE]	0.04	mg/kg	-	-	-	-	-	-	-	-	-	-	<0.040	<0.040	<0.040	NC	NC	
Volatile Organic Compounds																		
Chlorobenzene	0.05	mg/kg	-	-	-	-	-	-	-	-	-	-	<0.050	<0.050	<0.050	NC	NC	
Chloromethane	0.05	mg/kg	-	-	-	-	-	-	-	-	-	-	<0.050	<0.050	<0.050	NC	NC	
Dichlorobenzene, 1,2-	0.05	mg/kg	-	-	-	-	-	-	-	-	-	-	<0.050	<0.050	<0.050	NC	NC	
Dichlorobenzene, 1,3-	0.05	mg/kg	-	-	-	-	-	-	-	-	-	-	<0.050	<0.050	<0.050	NC	NC	
Dichlorobenzene, 1,4-	0.05	mg/kg	-	-	-	-	-	-	-	-	-	-	<0.050	<0.050	<0.050	NC	NC	
Dichloropropane, 1,2-	0.05	mg/kg	-	-	-	-	-	-	-	-	-	-	<0.050	<0.050	<0.050	NC	NC	
Dichloropropylene, cis+trans-1,3-	0.075	mg/kg	-	-	-	-	-	-	-	-	-	-	<0.075	<0.075	<0.075	NC	NC	
Dichloropropylene, cis-1,3-	0.05	mg/kg	-	-	-	-	-	-	-	-	-	-	<0.050	<0.050	<0.050	NC	NC	
Tetrachloroethane, 1,1,1,2-	0.05	mg/kg	-	-	-	-	-	-	-	-	-	-	<0.050	<0.050	<0.050	NC	NC	
Tetrachloroethane, 1,1,2,2-	0.05	mg/kg	-	-	-	-	-	-	-	-	-	-	<0.050	<0.050	<0.050	NC	NC	
Trichloroethane, 1,1,2-	0.05	mg/kg	-	-	-	-	-	-	-	-	-	-	<0.050	<0.050	<0.050	NC	NC	
Trichlorofluoromethane	0.05	mg/kg	-	-	-	-	-	-	-	-	-	-	<0.050	<0.050	<0.050	NC	NC	
Volatile Organic Compounds [Drycleaning]																		
Carbon tetrachloride	0.05	mg/kg	-	-	-	-	-	-	-	-	-	-	<0.050	<0.050	<0.050	NC	NC	
Chloroethane	0.05	mg/kg	-	-	-	-	-	-	-	-	-	-	<0.050	<0.050	<0.050	NC	NC	
Dichloroethane, 1,1-	0.05	mg/kg	-	-	-	-	-	-	-	-	-	-	<0.050	<0.050	<0.050	NC	NC	
Dichloroethane, 1,2-	0.05	mg/kg	-	-	-	-	-	-	-	-	-	-	<0.050	<0.050	<0.050	NC	NC	
Dichloroethylene, 1,1-	0.05	mg/kg	-	-	-	-	-	-	-	-	-	-	<0.085	<0.430	<0.305	NC	NC	
Dichloroethylene, cis-1,2-	0.05	mg/kg	-	-	-	-	-	-	-	-	-	-	<0.050	<0.050	<0.050	NC	NC	
Dichloroethylene, trans-1,2-	0.05	mg/kg	-	-	-	-	-	-	-	-	-	-	<0.050	<0.050	<0.050	NC	NC	
Dichloromethane	0.045	mg/kg	-	-	-	-	-	-	-	-	-	-	<0.045	<0.045	<0.045	NC	NC	
Dichloropropylene, trans-1,3-	0.05	mg/kg	-	-	-	-	-	-	-	-	-	-	<0.050	<0.050	<0.050	NC	NC	
Tetrachloroethylene	0.05	mg/kg	-	-	-	-	-	-	-	-	-	-	<0.050	<0.050	<0.050	NC	NC	
Trichloroethane, 1,1,1-	0.05	mg/kg	-	-	-	-	-	-	-	-	-	-	<0.050	<0.050	<0.050	NC	NC	
Trichloroethylene	0.01	mg/kg																

**APPENDIX 7E**

# Certificates of Analysis



**Attention: Collin Arens**

WSP Canada Inc.  
16820-107 AVE  
EDMONTON, AB  
CANADA T5P 4C3

Your Project #: CA0026317.6821.86000.04  
Site#: MILNE PORT/REFERENCE SITE  
Site Location: BAFFINLAND IRON MINE  
Your C.O.C. #: 08542425, 08542424, 08542426

**Report Date: 2024/11/12**  
Report #: R3586125  
Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**BUREAU VERITAS JOB #: C476093**

**Received: 2024/09/25, 08:36**

Sample Matrix: Tissue  
# Samples Received: 24

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Mercury in Tissue by CVAF - Wet Wt	20	N/A	2024/11/05	BBY7SOP-00012	EPA 245.7 R2m
Mercury in Tissue by CVAF - Wet Wt	4	N/A	2024/11/08	BBY7SOP-00012	EPA 245.7 R2m
Elements by ICPMS - Tissue Plug Wet Wt	20	2024/10/30	2024/11/03	BBY7SOP-00021 / BBY7SOP-00002	EPA 6020b R2 m
Elements by ICPMS - Tissue Plug Wet Wt	4	2024/10/31	2024/11/03	BBY7SOP-00021 / BBY7SOP-00002	EPA 6020b R2 m
Moisture in Tissue - Freeze Drying	19	2024/10/30	2024/10/31	BBY7SOP-00021	BCMOE BCLM Aug 2014
Moisture in Tissue - Freeze Drying	1	2024/10/30	2024/11/01	BBY7SOP-00021	BCMOE BCLM Aug 2014
Moisture in Tissue - Freeze Drying	3	2024/10/31	2024/10/31	BBY7SOP-00021	BCMOE BCLM Aug 2014
Moisture in Tissue - Freeze Drying	1	2024/10/31	2024/11/01	BBY7SOP-00021	BCMOE BCLM Aug 2014
PAH in Tissue by GC/MS (SIM) (1, 2)	6	2024/10/24	2024/10/29	ATL SOP 00104	EPA 8270E R6 m
PAH in Tissue by GC/MS (SIM) (1, 2)	14	2024/10/24	2024/10/30	ATL SOP 00104	EPA 8270E R6 m
PAH in Tissue by GC/MS (SIM) (1, 2)	4	2024/10/24	2024/10/31	ATL SOP 00104	EPA 8270E R6 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.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.



Your Project #: CA0026317.6821.86000.04  
Site#: MILNE PORT/REFERENCE SITE  
Site Location: BAFFINLAND IRON MINE  
Your C.O.C. #: 08542425, 08542424, 08542426

**Attention: Collin Arens**

WSP Canada Inc.  
16820-107 AVE  
EDMONTON, AB  
CANADA T5P 4C3

**Report Date: 2024/11/12**  
Report #: R3586125  
Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**BUREAU VERITAS JOB #: C476093**

**Received: 2024/09/25, 08:36**

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, Bureau Veritas Bedford, 200 Bluewater Rd. Suite 105, Bedford, NS, Canada, B4B 1G9  
(2) Results are reported on an as received basis unless otherwise indicated.

**Encryption Key**

Please direct all questions regarding this Certificate of Analysis to:  
Melissa McIntosh, Customer Solutions Representative  
Email: melissa.mcintosh@bureauveritas.com  
Phone# (604) 734 7276

=====

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 Raphael Kwan, General Manager, BC and Yukon Regions responsible for British Columbia Environmental laboratory operations.



BUREAU  
VERITAS

Bureau Veritas Job #: C476093  
Report Date: 2024/11/12

WSP Canada Inc.  
Client Project #: CA0026317.6821.86000.04  
Site Location: BAFFINLAND IRON MINE  
Sampler Initials: DV

### RESULTS OF CHEMICAL ANALYSES OF TISSUE

Bureau Veritas ID		CWI462		CWI463		CWI464		
Sampling Date		2024/08/04 12:10		2024/08/04 14:18		2024/08/04 14:47		
COC Number		08542425		08542425		08542425		
	UNITS	BAFF24UDPFFHSC1004	QC Batch	BAFF24UDPFFHSC1012	QC Batch	BAFF24UDPFFHSC1015	RDL	QC Batch
<b>Polycyclic Aromatics</b>								
1-Methylnaphthalene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
2-Methylnaphthalene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Benzo(j)fluoranthene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Perylene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Naphthalene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Acenaphthylene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Acenaphthene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Fluorene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Phenanthrene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Anthracene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Fluoranthene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Pyrene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Benzo(a)anthracene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Chrysene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Benzo(b)fluoranthene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Benzo(k)fluoranthene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Benzo(a)pyrene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Indeno(1,2,3-cd)pyrene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Dibenz(a,h)anthracene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Benzo(g,h,i)perylene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
<b>Surrogate Recovery (%)</b>								
D10-ANTHRACENE (sur.)	%	91	B593974	88	B593975	91	N/A	B593974
D8-ACENAPHTHYLENE (sur.)	%	90	B593974	89	B593975	89	N/A	B593974
TERPHENYL-D14 (sur.)	%	98	B593974	104	B593975	98	N/A	B593974
RDL = Reportable Detection Limit								
N/A = Not Applicable								



BUREAU  
VERITAS

Bureau Veritas Job #: C476093

Report Date: 2024/11/12

WSP Canada Inc.

Client Project #: CA0026317.6821.86000.04

Site Location: BAFFINLAND IRON MINE

Sampler Initials: DV

## RESULTS OF CHEMICAL ANALYSES OF TISSUE

Bureau Veritas ID		CWI465	CWI466	CWI467		
Sampling Date		2024/08/04 14:56	2024/08/04 16:20	2024/08/05 14:52		
COC Number		08542425	08542425	08542425		
	UNITS	BAFF24UDPFFHSC1016	BAFF24UDPFFHSC1023	BAFF24UDPFFHSC1034	RDL	QC Batch
<b>Polycyclic Aromatics</b>						
1-Methylnaphthalene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
2-Methylnaphthalene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Benzo(j)fluoranthene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Perylene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Naphthalene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Acenaphthylene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Acenaphthene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Fluorene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Phenanthrene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Anthracene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Fluoranthene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Pyrene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Benzo(a)anthracene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Chrysene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Benzo(b)fluoranthene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Benzo(k)fluoranthene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Benzo(a)pyrene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Indeno(1,2,3-cd)pyrene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Dibenz(a,h)anthracene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Benzo(g,h,i)perylene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
<b>Surrogate Recovery (%)</b>						
D10-ANTHRACENE (sur.)	%	94	95	93	N/A	B593974
D8-ACENAPHTHYLENE (sur.)	%	92	94	92	N/A	B593974
TERPHENYL-D14 (sur.)	%	99	100	96	N/A	B593974
RDL = Reportable Detection Limit						
N/A = Not Applicable						





BUREAU  
VERITAS

Bureau Veritas Job #: C476093

Report Date: 2024/11/12

WSP Canada Inc.

Client Project #: CA0026317.6821.86000.04

Site Location: BAFFINLAND IRON MINE

Sampler Initials: DV

## RESULTS OF CHEMICAL ANALYSES OF TISSUE

Bureau Veritas ID		CWI468	CWI469	CWI470	CWI471		
Sampling Date		2024/08/08 16:53	2024/08/08 17:13	2024/08/03 17:10	2024/08/03 17:30		
COC Number		08542425	08542425	08542424	08542424		
	UNITS	BAFF24UIPFFHSC1038	BAFF24UIPFFHSC1040	BAFF24UKLKFHSC2002	BAFF24UKLKFHSC2004	RDL	QC Batch

### Polycyclic Aromatics

1-Methylnaphthalene	mg/kg	<0.050	<0.050	<0.050	<0.050	0.050	B593974
2-Methylnaphthalene	mg/kg	<0.050	<0.050	<0.050	<0.050	0.050	B593974
Benzo(j)fluoranthene	mg/kg	<0.050	<0.050	<0.050	<0.050	0.050	B593974
Perylene	mg/kg	<0.050	<0.050	<0.050	<0.050	0.050	B593974
Naphthalene	mg/kg	<0.050	<0.050	<0.050	<0.050	0.050	B593974
Acenaphthylene	mg/kg	<0.050	<0.050	<0.050	<0.050	0.050	B593974
Acenaphthene	mg/kg	<0.050	<0.050	<0.050	<0.050	0.050	B593974
Fluorene	mg/kg	<0.050	<0.050	<0.050	<0.050	0.050	B593974
Phenanthrene	mg/kg	<0.050	<0.050	<0.050	<0.050	0.050	B593974
Anthracene	mg/kg	<0.050	<0.050	<0.050	<0.050	0.050	B593974
Fluoranthene	mg/kg	<0.050	<0.050	<0.050	<0.050	0.050	B593974
Pyrene	mg/kg	<0.050	<0.050	<0.050	<0.050	0.050	B593974
Benzo(a)anthracene	mg/kg	<0.050	<0.050	<0.050	<0.050	0.050	B593974
Chrysene	mg/kg	<0.050	<0.050	<0.050	<0.050	0.050	B593974
Benzo(b)fluoranthene	mg/kg	<0.050	<0.050	<0.050	<0.050	0.050	B593974
Benzo(k)fluoranthene	mg/kg	<0.050	<0.050	<0.050	<0.050	0.050	B593974
Benzo(a)pyrene	mg/kg	<0.050	<0.050	<0.050	<0.050	0.050	B593974
Indeno(1,2,3-cd)pyrene	mg/kg	<0.050	<0.050	<0.050	<0.050	0.050	B593974
Dibenz(a,h)anthracene	mg/kg	<0.050	<0.050	<0.050	<0.050	0.050	B593974
Benzo(g,h,i)perylene	mg/kg	<0.050	<0.050	<0.050	<0.050	0.050	B593974

### Surrogate Recovery (%)

D10-ANTHRACENE (sur.)	%	92	94	92	94	N/A	B593974
D8-ACENAPHTHYLENE (sur.)	%	91	93	92	93	N/A	B593974
TERPHENYL-D14 (sur.)	%	96	97	95	96	N/A	B593974

RDL = Reportable Detection Limit

N/A = Not Applicable



BUREAU  
VERITAS

Bureau Veritas Job #: C476093

Report Date: 2024/11/12

WSP Canada Inc.

Client Project #: CA0026317.6821.86000.04

Site Location: BAFFINLAND IRON MINE

Sampler Initials: DV

## RESULTS OF CHEMICAL ANALYSES OF TISSUE

Bureau Veritas ID		CWI472		CWI473		CWI474		
Sampling Date		2024/08/03 17:39		2024/08/09 16:23		2024/08/09 16:49		
COC Number		08542424		08542424		08542424		
	UNITS	BAFF24UKLFHSC2005	RDL	BAFF24UKLFHSC2015	RDL	BAFF24UKLFHSC2019	RDL	QC Batch
<b>Polycyclic Aromatics</b>								
1-Methylnaphthalene	mg/kg	<0.050	0.050	<0.053	0.053	<0.050	0.050	B593974
2-Methylnaphthalene	mg/kg	<0.050	0.050	<0.053	0.053	<0.050	0.050	B593974
Benzo(j)fluoranthene	mg/kg	<0.050	0.050	<0.053	0.053	<0.050	0.050	B593974
Perylene	mg/kg	<0.050	0.050	<0.053	0.053	<0.050	0.050	B593974
Naphthalene	mg/kg	<0.050	0.050	<0.053	0.053	<0.050	0.050	B593974
Acenaphthylene	mg/kg	<0.050	0.050	<0.053	0.053	<0.050	0.050	B593974
Acenaphthene	mg/kg	<0.050	0.050	<0.053	0.053	<0.050	0.050	B593974
Fluorene	mg/kg	<0.050	0.050	<0.053	0.053	<0.050	0.050	B593974
Phenanthrene	mg/kg	<0.050	0.050	<0.053	0.053	<0.050	0.050	B593974
Anthracene	mg/kg	<0.050	0.050	<0.053	0.053	<0.050	0.050	B593974
Fluoranthene	mg/kg	<0.050	0.050	<0.053	0.053	<0.050	0.050	B593974
Pyrene	mg/kg	<0.050	0.050	<0.053	0.053	<0.050	0.050	B593974
Benzo(a)anthracene	mg/kg	<0.050	0.050	<0.053	0.053	<0.050	0.050	B593974
Chrysene	mg/kg	<0.050	0.050	<0.053	0.053	<0.050	0.050	B593974
Benzo(b)fluoranthene	mg/kg	<0.050	0.050	<0.053	0.053	<0.050	0.050	B593974
Benzo(k)fluoranthene	mg/kg	<0.050	0.050	<0.053	0.053	<0.050	0.050	B593974
Benzo(a)pyrene	mg/kg	<0.050	0.050	<0.053	0.053	<0.050	0.050	B593974
Indeno(1,2,3-cd)pyrene	mg/kg	<0.050	0.050	<0.053	0.053	<0.050	0.050	B593974
Dibenz(a,h)anthracene	mg/kg	<0.050	0.050	<0.053	0.053	<0.050	0.050	B593974
Benzo(g,h,i)perylene	mg/kg	<0.050	0.050	<0.053	0.053	<0.050	0.050	B593974
<b>Surrogate Recovery (%)</b>								
D10-ANTHRACENE (sur.)	%	95	N/A	95	N/A	96	N/A	B593974
D8-ACENAPHTHYLENE (sur.)	%	94	N/A	92	N/A	95	N/A	B593974
TERPHENYL-D14 (sur.)	%	96	N/A	97 (1)	N/A	98	N/A	B593974
RDL = Reportable Detection Limit								
N/A = Not Applicable								
(1) Elevated PAH RDL(s) due to limited sample.								



BUREAU  
VERITAS

Bureau Veritas Job #: C476093

Report Date: 2024/11/12

WSP Canada Inc.

Client Project #: CA0026317.6821.86000.04

Site Location: BAFFINLAND IRON MINE

Sampler Initials: DV

## RESULTS OF CHEMICAL ANALYSES OF TISSUE

Bureau Veritas ID		CWI475	CWI476	CWI477		
Sampling Date		2024/08/09 17:59	2024/08/09 18:20	2024/08/16 17:20		
COC Number		08542424	08542424	08542424		
	UNITS	BAFF24UKLKFHSC2031	BAFF24UKLKFHSC2035	BAFF24UKLKFHSC2037	RDL	QC Batch
<b>Polycyclic Aromatics</b>						
1-Methylnaphthalene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
2-Methylnaphthalene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Benzo(j)fluoranthene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Perylene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Naphthalene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Acenaphthylene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Acenaphthene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Fluorene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Phenanthrene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Anthracene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Fluoranthene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Pyrene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Benzo(a)anthracene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Chrysene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Benzo(b)fluoranthene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Benzo(k)fluoranthene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Benzo(a)pyrene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Indeno(1,2,3-cd)pyrene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Dibenz(a,h)anthracene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Benzo(g,h,i)perylene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
<b>Surrogate Recovery (%)</b>						
D10-ANTHRACENE (sur.)	%	96	93	91	N/A	B593974
D8-ACENAPHTHYLENE (sur.)	%	93	92	92	N/A	B593974
TERPHENYL-D14 (sur.)	%	100	95	95	N/A	B593974
RDL = Reportable Detection Limit						
N/A = Not Applicable						



BUREAU  
VERITAS

Bureau Veritas Job #: C476093

Report Date: 2024/11/12

WSP Canada Inc.

Client Project #: CA0026317.6821.86000.04

Site Location: BAFFINLAND IRON MINE

Sampler Initials: DV

## RESULTS OF CHEMICAL ANALYSES OF TISSUE

Bureau Veritas ID		CWI478	CWI479	CWI480		
Sampling Date		2024/08/01 10:41	2024/08/07 12:54	2024/08/08 11:12		
COC Number		08542426	08542426	08542426		
	UNITS	BAFF23UDPFARCH4001	BAFF24UDPFARCH4002	BAFF24UIPFARCH4003	RDL	QC Batch
<b>Polycyclic Aromatics</b>						
1-Methylnaphthalene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
2-Methylnaphthalene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Benzo(j)fluoranthene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Perylene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Naphthalene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Acenaphthylene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Acenaphthene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Fluorene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Phenanthrene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Anthracene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Fluoranthene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Pyrene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Benzo(a)anthracene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Chrysene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Benzo(b)fluoranthene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Benzo(k)fluoranthene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Benzo(a)pyrene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Indeno(1,2,3-cd)pyrene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Dibenz(a,h)anthracene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
Benzo(g,h,i)perylene	mg/kg	<0.050	<0.050	<0.050	0.050	B593974
<b>Surrogate Recovery (%)</b>						
D10-ANTHRACENE (sur.)	%	94	94	89	N/A	B593974
D8-ACENAPHTHYLENE (sur.)	%	93	92	89	N/A	B593974
TERPHENYL-D14 (sur.)	%	97	96	94	N/A	B593974
RDL = Reportable Detection Limit						
N/A = Not Applicable						



BUREAU  
VERITAS

Bureau Veritas Job #: C476093

Report Date: 2024/11/12

WSP Canada Inc.

Client Project #: CA0026317.6821.86000.04

Site Location: BAFFINLAND IRON MINE

Sampler Initials: DV

## RESULTS OF CHEMICAL ANALYSES OF TISSUE

Bureau Veritas ID		CWI481		CWI482		CWI483		
Sampling Date		2024/08/08 11:12		2024/08/08 11:12		2024/08/11 11:47		
COC Number		08542426		08542426		08542426		
	UNITS	BAFF24UIPFARCH4004	QC Batch	BAFF24UIPFARCH4005	QC Batch	BAFF24UIPFARCH4008	RDL	QC Batch

### Polycyclic Aromatics

1-Methylnaphthalene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
2-Methylnaphthalene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Benzo(j)fluoranthene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Perylene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Naphthalene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Acenaphthylene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Acenaphthene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Fluorene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Phenanthrene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Anthracene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Fluoranthene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Pyrene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Benzo(a)anthracene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Chrysene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Benzo(b)fluoranthene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Benzo(k)fluoranthene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Benzo(a)pyrene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Indeno(1,2,3-cd)pyrene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Dibenz(a,h)anthracene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974
Benzo(g,h,i)perylene	mg/kg	<0.050	B593974	<0.050	B593975	<0.050	0.050	B593974

### Surrogate Recovery (%)

D10-ANTHRACENE (sur.)	%	91	B593974	84	B593975	93	N/A	B593974
D8-ACENAPHTHYLENE (sur.)	%	90	B593974	82	B593975	92	N/A	B593974
TERPHENYL-D14 (sur.)	%	94	B593974	88	B593975	95	N/A	B593974

RDL = Reportable Detection Limit

N/A = Not Applicable



BUREAU  
VERITAS

Bureau Veritas Job #: C476093  
Report Date: 2024/11/12

WSP Canada Inc.  
Client Project #: CA0026317.6821.86000.04  
Site Location: BAFFINLAND IRON MINE  
Sampler Initials: DV

RESULTS OF CHEMICAL ANALYSES OF TISSUE

Bureau Veritas ID		CWI484	CWI485		
Sampling Date		2024/08/11 11:47	2024/08/17 12:35		
COC Number		08542426	08542426		
	UNITS	BAFF24UIPFARCH4010	BAFF24UIPFARCH4012	RDL	QC Batch
<b>Polycyclic Aromatics</b>					
1-Methylnaphthalene	mg/kg	<0.050	<0.050	0.050	B593975
2-Methylnaphthalene	mg/kg	<0.050	<0.050	0.050	B593975
Benzo(j)fluoranthene	mg/kg	<0.050	<0.050	0.050	B593975
Perylene	mg/kg	<0.050	<0.050	0.050	B593975
Naphthalene	mg/kg	<0.050	<0.050	0.050	B593975
Acenaphthylene	mg/kg	<0.050	<0.050	0.050	B593975
Acenaphthene	mg/kg	<0.050	<0.050	0.050	B593975
Fluorene	mg/kg	<0.050	<0.050	0.050	B593975
Phenanthrene	mg/kg	<0.050	<0.050	0.050	B593975
Anthracene	mg/kg	<0.050	<0.050	0.050	B593975
Fluoranthene	mg/kg	<0.050	<0.050	0.050	B593975
Pyrene	mg/kg	<0.050	<0.050	0.050	B593975
Benzo(a)anthracene	mg/kg	<0.050	<0.050	0.050	B593975
Chrysene	mg/kg	<0.050	<0.050	0.050	B593975
Benzo(b)fluoranthene	mg/kg	<0.050	<0.050	0.050	B593975
Benzo(k)fluoranthene	mg/kg	<0.050	<0.050	0.050	B593975
Benzo(a)pyrene	mg/kg	<0.050	<0.050	0.050	B593975
Indeno(1,2,3-cd)pyrene	mg/kg	<0.050	<0.050	0.050	B593975
Dibenz(a,h)anthracene	mg/kg	<0.050	<0.050	0.050	B593975
Benzo(g,h,i)perylene	mg/kg	<0.050	<0.050	0.050	B593975
<b>Surrogate Recovery (%)</b>					
D10-ANTHRACENE (sur.)	%	83	83	N/A	B593975
D8-ACENAPHTHYLENE (sur.)	%	82	81	N/A	B593975
TERPHENYL-D14 (sur.)	%	97	97	N/A	B593975
RDL = Reportable Detection Limit					
N/A = Not Applicable					



BUREAU  
VERITAS

Bureau Veritas Job #: C476093

Report Date: 2024/11/12

WSP Canada Inc.

Client Project #: CA0026317.6821.86000.04

Site Location: BAFFINLAND IRON MINE

Sampler Initials: DV

### ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Bureau Veritas ID		CWI462		CWI463		
Sampling Date		2024/08/04 12:10		2024/08/04 14:18		
COC Number		08542425		08542425		
	UNITS	BAFF24UDPFFHSC1004	RDL	BAFF24UDPFFHSC1012	RDL	QC Batch
<b>Mercury by CVAF</b>						
Total (Wet Wt) Mercury (Hg)	mg/kg	0.204	0.0020	0.320	0.010	B589198
<b>Total Metals by ICPMS</b>						
Total (Wet Wt) Aluminum (Al)	mg/kg	1.24	0.50	1.32	0.50	B587518
Total (Wet Wt) Antimony (Sb)	mg/kg	0.0034	0.0020	0.0069	0.0020	B587518
Total (Wet Wt) Arsenic (As)	mg/kg	2.15	0.0050	3.25	0.0050	B587518
Total (Wet Wt) Barium (Ba)	mg/kg	0.017	0.010	0.030	0.010	B587518
Total (Wet Wt) Beryllium (Be)	mg/kg	<0.0020	0.0020	<0.0020	0.0020	B587518
Total (Wet Wt) Bismuth (Bi)	mg/kg	0.0020	0.0013	0.0026	0.0013	B587518
Total (Wet Wt) Boron (B)	mg/kg	<0.20	0.20	<0.20	0.20	B587518
Total (Wet Wt) Cadmium (Cd)	mg/kg	0.0069	0.0013	0.0077	0.0013	B587518
Total (Wet Wt) Calcium (Ca)	mg/kg	129	4.0	111	4.0	B587518
Total (Wet Wt) Chromium (Cr)	mg/kg	<0.025	0.025	0.055	0.025	B587518
Total (Wet Wt) Cobalt (Co)	mg/kg	0.0140	0.0013	0.0162	0.0013	B587518
Total (Wet Wt) Copper (Cu)	mg/kg	0.499	0.013	0.638	0.013	B587518
Total (Wet Wt) Iron (Fe)	mg/kg	5.69	0.25	8.30	0.25	B587518
Total (Wet Wt) Lead (Pb)	mg/kg	0.0085	0.0013	0.0093	0.0013	B587518
Total (Wet Wt) Magnesium (Mg)	mg/kg	199	0.40	205	0.40	B587518
Total (Wet Wt) Manganese (Mn)	mg/kg	0.154	0.010	0.170	0.010	B587518
Total (Wet Wt) Mercury (Hg)	mg/kg	0.188	0.013	0.303	0.013	B587518
Total (Wet Wt) Molybdenum (Mo)	mg/kg	<0.0080	0.0080	<0.0080	0.0080	B587518
Total (Wet Wt) Nickel (Ni)	mg/kg	0.014	0.010	0.060	0.010	B587518
Total (Wet Wt) Phosphorus (P)	mg/kg	2070	2.0	1990	2.0	B587518
Total (Wet Wt) Potassium (K)	mg/kg	3620	2.5	3320	2.5	B587518
Total (Wet Wt) Selenium (Se)	mg/kg	0.489	0.010	0.450	0.010	B587518
Total (Wet Wt) Silver (Ag)	mg/kg	<0.0013	0.0013	<0.0013	0.0013	B587518
Total (Wet Wt) Sodium (Na)	mg/kg	679	2.5	894	2.5	B587518
Total (Wet Wt) Strontium (Sr)	mg/kg	0.442	0.013	0.585	0.013	B587518
Total (Wet Wt) Thallium (Tl)	mg/kg	0.00106	0.00040	0.00062	0.00040	B587518
Total (Wet Wt) Tin (Sn)	mg/kg	<0.020	0.020	0.021	0.020	B587518
Total (Wet Wt) Titanium (Ti)	mg/kg	0.32	0.13	0.28	0.13	B587518
Total (Wet Wt) Uranium (U)	mg/kg	<0.00040	0.00040	0.00203	0.00040	B587518
RDL = Reportable Detection Limit						



BUREAU  
VERITAS

Bureau Veritas Job #: C476093  
Report Date: 2024/11/12

WSP Canada Inc.  
Client Project #: CA0026317.6821.86000.04  
Site Location: BAFFINLAND IRON MINE  
Sampler Initials: DV

ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Bureau Veritas ID		CWI462		CWI463		
Sampling Date		2024/08/04 12:10		2024/08/04 14:18		
COC Number		08542425		08542425		
	UNITS	BAFF24UDPFFHSC1004	RDL	BAFF24UDPFFHSC1012	RDL	QC Batch
Total (Wet Wt) Vanadium (V)	mg/kg	<0.020	0.020	<0.020	0.020	B587518
Total (Wet Wt) Zinc (Zn)	mg/kg	12.2	0.20	15.7	0.20	B587518
RDL = Reportable Detection Limit						





### ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Bureau Veritas ID		CWI464	CWI465	CWI466		
Sampling Date		2024/08/04 14:47	2024/08/04 14:56	2024/08/04 16:20		
COC Number		08542425	08542425	08542425		
	UNITS	BAFF24UDPFFHSC1015	BAFF24UDPFFHSC1016	BAFF24UDPFFHSC1023	RDL	QC Batch

Mercury by CVAE						
Total (Wet Wt) Mercury (Hg)	mg/kg	0.105	0.142	0.127	0.0020	B589198
Total Metals by ICPMS						
Total (Wet Wt) Aluminum (Al)	mg/kg	1.77	1.60	1.89	0.50	B587518
Total (Wet Wt) Antimony (Sb)	mg/kg	0.0021	0.0088	0.0044	0.0020	B587518
Total (Wet Wt) Arsenic (As)	mg/kg	3.84	3.42	2.79	0.0050	B587518
Total (Wet Wt) Barium (Ba)	mg/kg	0.016	0.235	0.185	0.010	B587518
Total (Wet Wt) Beryllium (Be)	mg/kg	<0.0020	<0.0020	<0.0020	0.0020	B587518
Total (Wet Wt) Bismuth (Bi)	mg/kg	<0.0013	0.0056	0.0028	0.0013	B587518
Total (Wet Wt) Boron (B)	mg/kg	<0.20	<0.20	<0.20	0.20	B587518
Total (Wet Wt) Cadmium (Cd)	mg/kg	0.0042	0.0216	0.0118	0.0013	B587518
Total (Wet Wt) Calcium (Ca)	mg/kg	138	4410	3540	4.0	B587518
Total (Wet Wt) Chromium (Cr)	mg/kg	<0.025	0.080	0.050	0.025	B587518
Total (Wet Wt) Cobalt (Co)	mg/kg	0.0075	0.0138	0.0128	0.0013	B587518
Total (Wet Wt) Copper (Cu)	mg/kg	0.316	0.418	0.596	0.013	B587518
Total (Wet Wt) Iron (Fe)	mg/kg	5.72	36.5	10.3	0.25	B587518
Total (Wet Wt) Lead (Pb)	mg/kg	0.0072	0.0185	0.0114	0.0013	B587518
Total (Wet Wt) Magnesium (Mg)	mg/kg	291	322	299	0.40	B587518
Total (Wet Wt) Manganese (Mn)	mg/kg	0.153	1.06	0.636	0.010	B587518
Total (Wet Wt) Mercury (Hg)	mg/kg	0.101	0.137	0.125	0.013	B587518
Total (Wet Wt) Molybdenum (Mo)	mg/kg	<0.0080	<0.0080	<0.0080	0.0080	B587518
Total (Wet Wt) Nickel (Ni)	mg/kg	0.010	0.520	0.048	0.010	B587518
Total (Wet Wt) Phosphorus (P)	mg/kg	2190	4850	4260	2.0	B587518
Total (Wet Wt) Potassium (K)	mg/kg	3870	3980	3890	2.5	B587518
Total (Wet Wt) Selenium (Se)	mg/kg	0.485	0.682	0.717	0.010	B587518
Total (Wet Wt) Silver (Ag)	mg/kg	<0.0013	<0.0013	<0.0013	0.0013	B587518
Total (Wet Wt) Sodium (Na)	mg/kg	586	896	710	2.5	B587518
Total (Wet Wt) Strontium (Sr)	mg/kg	0.337	24.7	17.9	0.013	B587518
Total (Wet Wt) Thallium (Tl)	mg/kg	0.00055	0.00118	0.00126	0.00040	B587518
Total (Wet Wt) Tin (Sn)	mg/kg	0.021	0.030	0.025	0.020	B587518
Total (Wet Wt) Titanium (Ti)	mg/kg	0.33	0.59	0.57	0.13	B587518
Total (Wet Wt) Uranium (U)	mg/kg	0.00048	0.00403	0.00418	0.00040	B587518

RDL = Reportable Detection Limit



BUREAU  
VERITAS

Bureau Veritas Job #: C476093  
Report Date: 2024/11/12

WSP Canada Inc.  
Client Project #: CA0026317.6821.86000.04  
Site Location: BAFFINLAND IRON MINE  
Sampler Initials: DV

ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Bureau Veritas ID		CWI464	CWI465	CWI466		
Sampling Date		2024/08/04 14:47	2024/08/04 14:56	2024/08/04 16:20		
COC Number		08542425	08542425	08542425		
	UNITS	BAFF24UDPFFHSC1015	BAFF24UDPFFHSC1016	BAFF24UDPFFHSC1023	RDL	QC Batch
Total (Wet Wt) Vanadium (V)	mg/kg	<0.020	0.023	<0.020	0.020	B587518
Total (Wet Wt) Zinc (Zn)	mg/kg	10.1	24.4	30.6	0.20	B587518
RDL = Reportable Detection Limit						



BUREAU  
VERITAS

Bureau Veritas Job #: C476093

Report Date: 2024/11/12

WSP Canada Inc.

Client Project #: CA0026317.6821.86000.04

Site Location: BAFFINLAND IRON MINE

Sampler Initials: DV

### ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Bureau Veritas ID		CWI467	CWI468	CWI469		
Sampling Date		2024/08/05 14:52	2024/08/08 16:53	2024/08/08 17:13		
COC Number		08542425	08542425	08542425		
	UNITS	BAFF24UDPFFHSC1034	BAFF24UIPFFHSC1038	BAFF24UIPFFHSC1040	RDL	QC Batch
<b>Mercury by CVAE</b>						
Total (Wet Wt) Mercury (Hg)	mg/kg	0.144	0.147	0.218	0.0020	B589198
<b>Total Metals by ICPMS</b>						
Total (Wet Wt) Aluminum (Al)	mg/kg	1.53	1.59	0.57	0.50	B587518
Total (Wet Wt) Antimony (Sb)	mg/kg	0.0080	0.0020	0.0054	0.0020	B587518
Total (Wet Wt) Arsenic (As)	mg/kg	3.61	2.59	6.03	0.0050	B587518
Total (Wet Wt) Barium (Ba)	mg/kg	0.021	0.034	0.028	0.010	B587518
Total (Wet Wt) Beryllium (Be)	mg/kg	<0.0020	<0.0020	<0.0020	0.0020	B587518
Total (Wet Wt) Bismuth (Bi)	mg/kg	<0.0013	0.0041	0.0048	0.0013	B587518
Total (Wet Wt) Boron (B)	mg/kg	<0.20	<0.20	<0.20	0.20	B587518
Total (Wet Wt) Cadmium (Cd)	mg/kg	0.0163	0.0035	0.0054	0.0013	B587518
Total (Wet Wt) Calcium (Ca)	mg/kg	168	261	125	4.0	B587518
Total (Wet Wt) Chromium (Cr)	mg/kg	0.260	<0.025	<0.025	0.025	B587518
Total (Wet Wt) Cobalt (Co)	mg/kg	0.0144	0.0089	0.0052	0.0013	B587518
Total (Wet Wt) Copper (Cu)	mg/kg	0.680	0.431	0.388	0.013	B587518
Total (Wet Wt) Iron (Fe)	mg/kg	14.5	6.04	5.69	0.25	B587518
Total (Wet Wt) Lead (Pb)	mg/kg	0.0078	0.0034	0.0022	0.0013	B587518
Total (Wet Wt) Magnesium (Mg)	mg/kg	188	239	196	0.40	B587518
Total (Wet Wt) Manganese (Mn)	mg/kg	0.271	0.183	0.110	0.010	B587518
Total (Wet Wt) Mercury (Hg)	mg/kg	0.135	0.144	0.205	0.013	B587518
Total (Wet Wt) Molybdenum (Mo)	mg/kg	<0.0080	<0.0080	<0.0080	0.0080	B587518
Total (Wet Wt) Nickel (Ni)	mg/kg	0.027	0.041	0.021	0.010	B587518
Total (Wet Wt) Phosphorus (P)	mg/kg	2210	2170	2100	2.0	B587518
Total (Wet Wt) Potassium (K)	mg/kg	3600	3760	3760	2.5	B587518
Total (Wet Wt) Selenium (Se)	mg/kg	0.614	0.446	0.570	0.010	B587518
Total (Wet Wt) Silver (Ag)	mg/kg	0.0016	<0.0013	<0.0013	0.0013	B587518
Total (Wet Wt) Sodium (Na)	mg/kg	647	726	731	2.5	B587518
Total (Wet Wt) Strontium (Sr)	mg/kg	0.493	1.45	0.520	0.013	B587518
Total (Wet Wt) Thallium (Tl)	mg/kg	0.00131	0.00077	0.00097	0.00040	B587518
Total (Wet Wt) Tin (Sn)	mg/kg	0.035	0.023	<0.020	0.020	B587518
Total (Wet Wt) Titanium (Ti)	mg/kg	0.31	0.28	0.29	0.13	B587518
Total (Wet Wt) Uranium (U)	mg/kg	<0.00040	<0.00040	<0.00040	0.00040	B587518
RDL = Reportable Detection Limit						



ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Bureau Veritas ID		CWI467	CWI468	CWI469		
Sampling Date		2024/08/05 14:52	2024/08/08 16:53	2024/08/08 17:13		
COC Number		08542425	08542425	08542425		
	UNITS	BAFF24UDPFFHSC1034	BAFF24UIPFFHSC1038	BAFF24UIPFFHSC1040	RDL	QC Batch
Total (Wet Wt) Vanadium (V)	mg/kg	<0.020	<0.020	<0.020	0.020	B587518
Total (Wet Wt) Zinc (Zn)	mg/kg	20.3	11.4	13.0	0.20	B587518
RDL = Reportable Detection Limit						



BUREAU  
VERITAS

Bureau Veritas Job #: C476093

Report Date: 2024/11/12

WSP Canada Inc.

Client Project #: CA0026317.6821.86000.04

Site Location: BAFFINLAND IRON MINE

Sampler Initials: DV

### ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Bureau Veritas ID		CWI470	CWI471	CWI472		
Sampling Date		2024/08/03 17:10	2024/08/03 17:30	2024/08/03 17:39		
COC Number		08542424	08542424	08542424		
	UNITS	BAFF24UKLKFHSC2002	BAFF24UKLKFHSC2004	BAFF24UKLKFHSC2005	RDL	QC Batch
<b>Mercury by CVAE</b>						
Total (Wet Wt) Mercury (Hg)	mg/kg	0.363	0.156	0.104	0.0020	B589198
<b>Total Metals by ICPMS</b>						
Total (Wet Wt) Aluminum (Al)	mg/kg	1.85	1.67	1.39	0.50	B587518
Total (Wet Wt) Antimony (Sb)	mg/kg	0.0039	0.0085	0.0048	0.0020	B587518
Total (Wet Wt) Arsenic (As)	mg/kg	8.42	5.78	1.91	0.0050	B587518
Total (Wet Wt) Barium (Ba)	mg/kg	0.031	0.042	0.051	0.010	B587518
Total (Wet Wt) Beryllium (Be)	mg/kg	<0.0020	<0.0020	<0.0020	0.0020	B587518
Total (Wet Wt) Bismuth (Bi)	mg/kg	<0.0013	<0.0013	<0.0013	0.0013	B587518
Total (Wet Wt) Boron (B)	mg/kg	<0.20	<0.20	<0.20	0.20	B587518
Total (Wet Wt) Cadmium (Cd)	mg/kg	0.0051	0.0044	0.0037	0.0013	B587518
Total (Wet Wt) Calcium (Ca)	mg/kg	236	104	108	4.0	B587518
Total (Wet Wt) Chromium (Cr)	mg/kg	<0.025	0.051	<0.025	0.025	B587518
Total (Wet Wt) Cobalt (Co)	mg/kg	0.0116	0.0221	0.0094	0.0013	B587518
Total (Wet Wt) Copper (Cu)	mg/kg	0.463	0.722	0.367	0.013	B587518
Total (Wet Wt) Iron (Fe)	mg/kg	5.22	12.7	42.5	0.25	B587518
Total (Wet Wt) Lead (Pb)	mg/kg	0.0046	0.0087	0.0077	0.0013	B587518
Total (Wet Wt) Magnesium (Mg)	mg/kg	255	205	230	0.40	B587518
Total (Wet Wt) Manganese (Mn)	mg/kg	0.513	0.159	0.275	0.010	B587518
Total (Wet Wt) Mercury (Hg)	mg/kg	0.360	0.143	0.095	0.013	B587518
Total (Wet Wt) Molybdenum (Mo)	mg/kg	<0.0080	<0.0080	<0.0080	0.0080	B587518
Total (Wet Wt) Nickel (Ni)	mg/kg	0.028	0.032	0.258	0.010	B587518
Total (Wet Wt) Phosphorus (P)	mg/kg	2350	2000	2130	2.0	B587518
Total (Wet Wt) Potassium (K)	mg/kg	3820	3660	3620	2.5	B587518
Total (Wet Wt) Selenium (Se)	mg/kg	0.782	0.504	0.445	0.010	B587518
Total (Wet Wt) Silver (Ag)	mg/kg	<0.0013	<0.0013	<0.0013	0.0013	B587518
Total (Wet Wt) Sodium (Na)	mg/kg	923	1150	829	2.5	B587518
Total (Wet Wt) Strontium (Sr)	mg/kg	1.71	0.623	0.402	0.013	B587518
Total (Wet Wt) Thallium (Tl)	mg/kg	0.00058	0.00107	0.00084	0.00040	B587518
Total (Wet Wt) Tin (Sn)	mg/kg	0.036	0.044	0.024	0.020	B587518
Total (Wet Wt) Titanium (Ti)	mg/kg	0.39	0.31	0.27	0.13	B587518
Total (Wet Wt) Uranium (U)	mg/kg	0.00056	<0.00040	<0.00040	0.00040	B587518
RDL = Reportable Detection Limit						



ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Bureau Veritas ID		CWI470	CWI471	CWI472		
Sampling Date		2024/08/03 17:10	2024/08/03 17:30	2024/08/03 17:39		
COC Number		08542424	08542424	08542424		
	UNITS	BAFF24UKLKFHSC2002	BAFF24UKLKFHSC2004	BAFF24UKLKFHSC2005	RDL	QC Batch
Total (Wet Wt) Vanadium (V)	mg/kg	0.026	<0.020	<0.020	0.020	B587518
Total (Wet Wt) Zinc (Zn)	mg/kg	32.1	17.3	11.0	0.20	B587518
RDL = Reportable Detection Limit						



BUREAU  
VERITAS

Bureau Veritas Job #: C476093

Report Date: 2024/11/12

WSP Canada Inc.

Client Project #: CA0026317.6821.86000.04

Site Location: BAFFINLAND IRON MINE

Sampler Initials: DV

### ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Bureau Veritas ID		CWI473	CWI474		CWI475		
Sampling Date		2024/08/09 16:23	2024/08/09 16:49		2024/08/09 17:59		
COC Number		08542424	08542424		08542424		
	UNITS	BAFF24UKLKFHSC2015	BAFF24UKLKFHSC2019	RDL	BAFF24UKLKFHSC2031	RDL	QC Batch

#### Mercury by CVAE

Total (Wet Wt) Mercury (Hg)	mg/kg	0.0928	0.0983	0.0020	0.332	0.010	B589198
-----------------------------	-------	--------	--------	--------	-------	-------	---------

#### Total Metals by ICPMS

Total (Wet Wt) Aluminum (Al)	mg/kg	1.26	0.71	0.50	0.62	0.50	B587518
Total (Wet Wt) Antimony (Sb)	mg/kg	0.0063	0.0030	0.0020	0.0025	0.0020	B587518
Total (Wet Wt) Arsenic (As)	mg/kg	1.98	2.87	0.0050	5.46	0.0050	B587518
Total (Wet Wt) Barium (Ba)	mg/kg	0.099	0.016	0.010	0.041	0.010	B587518
Total (Wet Wt) Beryllium (Be)	mg/kg	<0.0020	<0.0020	0.0020	<0.0020	0.0020	B587518
Total (Wet Wt) Bismuth (Bi)	mg/kg	<0.0013	<0.0013	0.0013	<0.0013	0.0013	B587518
Total (Wet Wt) Boron (B)	mg/kg	<0.20	<0.20	0.20	<0.20	0.20	B587518
Total (Wet Wt) Cadmium (Cd)	mg/kg	0.0086	0.0082	0.0013	0.0122	0.0013	B587518
Total (Wet Wt) Calcium (Ca)	mg/kg	306	141	4.0	117	4.0	B587518
Total (Wet Wt) Chromium (Cr)	mg/kg	0.034	<0.025	0.025	<0.025	0.025	B587518
Total (Wet Wt) Cobalt (Co)	mg/kg	0.0164	0.0128	0.0013	0.0154	0.0013	B587518
Total (Wet Wt) Copper (Cu)	mg/kg	0.441	0.374	0.013	0.393	0.013	B587518
Total (Wet Wt) Iron (Fe)	mg/kg	11.8	5.48	0.25	5.97	0.25	B587518
Total (Wet Wt) Lead (Pb)	mg/kg	0.0098	0.0042	0.0013	0.0040	0.0013	B587518
Total (Wet Wt) Magnesium (Mg)	mg/kg	219	309	0.40	234	0.40	B587518
Total (Wet Wt) Manganese (Mn)	mg/kg	0.357	0.210	0.010	0.193	0.010	B587518
Total (Wet Wt) Mercury (Hg)	mg/kg	0.089	0.091	0.013	0.302	0.013	B587518
Total (Wet Wt) Molybdenum (Mo)	mg/kg	<0.0080	<0.0080	0.0080	<0.0080	0.0080	B587518
Total (Wet Wt) Nickel (Ni)	mg/kg	0.088	0.027	0.010	0.030	0.010	B587518
Total (Wet Wt) Phosphorus (P)	mg/kg	2270	2200	2.0	2220	2.0	B587518
Total (Wet Wt) Potassium (K)	mg/kg	3850	3810	2.5	3720	2.5	B587518
Total (Wet Wt) Selenium (Se)	mg/kg	0.509	0.703	0.010	0.642	0.010	B587518
Total (Wet Wt) Silver (Ag)	mg/kg	<0.0013	<0.0013	0.0013	<0.0013	0.0013	B587518
Total (Wet Wt) Sodium (Na)	mg/kg	781	705	2.5	739	2.5	B587518
Total (Wet Wt) Strontium (Sr)	mg/kg	1.31	0.424	0.013	0.682	0.013	B587518
Total (Wet Wt) Thallium (Tl)	mg/kg	0.00079	0.00050	0.00040	0.00117	0.00040	B587518
Total (Wet Wt) Tin (Sn)	mg/kg	<0.020	<0.020	0.020	<0.020	0.020	B587518
Total (Wet Wt) Titanium (Ti)	mg/kg	0.27	0.31	0.13	0.29	0.13	B587518
Total (Wet Wt) Uranium (U)	mg/kg	0.00049	<0.00040	0.00040	<0.00040	0.00040	B587518

RDL = Reportable Detection Limit



ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Bureau Veritas ID		CWI473	CWI474		CWI475		
Sampling Date		2024/08/09 16:23	2024/08/09 16:49		2024/08/09 17:59		
COC Number		08542424	08542424		08542424		
	UNITS	BAFF24UKLKFHSC2015	BAFF24UKLKFHSC2019	RDL	BAFF24UKLKFHSC2031	RDL	QC Batch
Total (Wet Wt) Vanadium (V)	mg/kg	<0.020	<0.020	0.020	<0.020	0.020	B587518
Total (Wet Wt) Zinc (Zn)	mg/kg	15.6	20.1	0.20	34.3	0.20	B587518
RDL = Reportable Detection Limit							





## ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Bureau Veritas ID		CWI476	CWI477	CWI478		
Sampling Date		2024/08/09 18:20	2024/08/16 17:20	2024/08/01 10:41		
COC Number		08542424	08542424	08542426		
	UNITS	BAFF24UKLKFHSC2035	BAFF24UKLKFHSC2037	BAFF23UDPFARCH4001	RDL	QC Batch
<b>Mercury by CVAE</b>						
Total (Wet Wt) Mercury (Hg)	mg/kg	0.0667	0.135	0.0699	0.0020	B589198
<b>Total Metals by ICPMS</b>						
Total (Wet Wt) Aluminum (Al)	mg/kg	0.77	1.21	0.60	0.50	B587518
Total (Wet Wt) Antimony (Sb)	mg/kg	0.0070	0.0066	0.0022	0.0020	B587518
Total (Wet Wt) Arsenic (As)	mg/kg	3.99	3.02	0.992	0.0050	B587518
Total (Wet Wt) Barium (Ba)	mg/kg	0.093	0.022	0.012	0.010	B587518
Total (Wet Wt) Beryllium (Be)	mg/kg	<0.0020	<0.0020	<0.0020	0.0020	B587518
Total (Wet Wt) Bismuth (Bi)	mg/kg	<0.0013	<0.0013	<0.0013	0.0013	B587518
Total (Wet Wt) Boron (B)	mg/kg	<0.20	<0.20	<0.20	0.20	B587518
Total (Wet Wt) Cadmium (Cd)	mg/kg	0.0089	0.0072	0.0069	0.0013	B587518
Total (Wet Wt) Calcium (Ca)	mg/kg	111	129	251	4.0	B587518
Total (Wet Wt) Chromium (Cr)	mg/kg	<0.025	0.148	<0.025	0.025	B587518
Total (Wet Wt) Cobalt (Co)	mg/kg	0.0146	0.0068	0.0067	0.0013	B587518
Total (Wet Wt) Copper (Cu)	mg/kg	0.384	0.315	0.225	0.013	B587518
Total (Wet Wt) Iron (Fe)	mg/kg	6.47	7.06	4.25	0.25	B587518
Total (Wet Wt) Lead (Pb)	mg/kg	0.0123	0.0056	0.0029	0.0013	B587518
Total (Wet Wt) Magnesium (Mg)	mg/kg	272	225	339	0.40	B587518
Total (Wet Wt) Manganese (Mn)	mg/kg	0.265	0.174	0.095	0.010	B587518
Total (Wet Wt) Mercury (Hg)	mg/kg	0.065	0.124	0.065	0.013	B587518
Total (Wet Wt) Molybdenum (Mo)	mg/kg	<0.0080	<0.0080	<0.0080	0.0080	B587518
Total (Wet Wt) Nickel (Ni)	mg/kg	0.011	0.013	0.049	0.010	B587518
Total (Wet Wt) Phosphorus (P)	mg/kg	2220	2070	3360	2.0	B587518
Total (Wet Wt) Potassium (K)	mg/kg	3550	3490	4990	2.5	B587518
Total (Wet Wt) Selenium (Se)	mg/kg	0.741	0.567	0.483	0.010	B587518
Total (Wet Wt) Silver (Ag)	mg/kg	<0.0013	<0.0013	<0.0013	0.0013	B587518
Total (Wet Wt) Sodium (Na)	mg/kg	709	675	305	2.5	B587518
Total (Wet Wt) Strontium (Sr)	mg/kg	0.419	0.534	0.261	0.013	B587518
Total (Wet Wt) Thallium (Tl)	mg/kg	0.00058	0.00070	0.00347	0.00040	B587518
Total (Wet Wt) Tin (Sn)	mg/kg	<0.020	<0.020	<0.020	0.020	B587518
Total (Wet Wt) Titanium (Ti)	mg/kg	0.27	0.28	0.44	0.13	B587518
Total (Wet Wt) Uranium (U)	mg/kg	<0.00040	<0.00040	<0.00040	0.00040	B587518
RDL = Reportable Detection Limit						



ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Bureau Veritas ID		CWI476	CWI477	CWI478		
Sampling Date		2024/08/09 18:20	2024/08/16 17:20	2024/08/01 10:41		
COC Number		08542424	08542424	08542426		
	UNITS	BAFF24UKLKFHSC2035	BAFF24UKLKFHSC2037	BAFF23UDPFARCH4001	RDL	QC Batch
Total (Wet Wt) Vanadium (V)	mg/kg	<0.020	<0.020	<0.020	0.020	B587518
Total (Wet Wt) Zinc (Zn)	mg/kg	13.4	12.2	5.74	0.20	B587518
RDL = Reportable Detection Limit						



BUREAU  
VERITAS

Bureau Veritas Job #: C476093

Report Date: 2024/11/12

WSP Canada Inc.

Client Project #: CA0026317.6821.86000.04

Site Location: BAFFINLAND IRON MINE

Sampler Initials: DV

### ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Bureau Veritas ID		CWI479	CWI480		CWI481		
Sampling Date		2024/08/07 12:54	2024/08/08 11:12		2024/08/08 11:12		
COC Number		08542426	08542426		08542426		
	UNITS	BAFF24UDPFARCH4002	BAFF24UIPFARCH4003	RDL	BAFF24UIPFARCH4004	RDL	QC Batch

<b>Mercury by CVAf</b>							
Total (Wet Wt) Mercury (Hg)	mg/kg	0.0531	0.0419	0.0020	0.0541	0.0010	B589198
<b>Total Metals by ICPMS</b>							
Total (Wet Wt) Aluminum (Al)	mg/kg	1.61	0.82	0.50	0.84	0.50	B587518
Total (Wet Wt) Antimony (Sb)	mg/kg	0.0068	0.0041	0.0020	0.0028	0.0020	B587518
Total (Wet Wt) Arsenic (As)	mg/kg	0.953	1.00	0.0050	1.71	0.0050	B587518
Total (Wet Wt) Barium (Ba)	mg/kg	0.033	0.087	0.010	<0.010	0.010	B587518
Total (Wet Wt) Beryllium (Be)	mg/kg	<0.0020	<0.0020	0.0020	<0.0020	0.0020	B587518
Total (Wet Wt) Bismuth (Bi)	mg/kg	<0.0013	<0.0013	0.0013	<0.0013	0.0013	B587518
Total (Wet Wt) Boron (B)	mg/kg	<0.20	<0.20	0.20	<0.20	0.20	B587518
Total (Wet Wt) Cadmium (Cd)	mg/kg	0.0056	0.0053	0.0013	0.0055	0.0013	B587518
Total (Wet Wt) Calcium (Ca)	mg/kg	252	110	4.0	79.2	4.0	B587518
Total (Wet Wt) Chromium (Cr)	mg/kg	<0.025	<0.025	0.025	<0.025	0.025	B587518
Total (Wet Wt) Cobalt (Co)	mg/kg	0.0070	0.0056	0.0013	0.0059	0.0013	B587518
Total (Wet Wt) Copper (Cu)	mg/kg	0.752	0.393	0.013	0.958	0.013	B587518
Total (Wet Wt) Iron (Fe)	mg/kg	32.9	5.06	0.25	7.29	0.25	B587518
Total (Wet Wt) Lead (Pb)	mg/kg	0.0239	0.0044	0.0013	0.0039	0.0013	B587518
Total (Wet Wt) Magnesium (Mg)	mg/kg	282	318	0.40	287	0.40	B587518
Total (Wet Wt) Manganese (Mn)	mg/kg	0.108	0.107	0.010	0.114	0.010	B587518
Total (Wet Wt) Mercury (Hg)	mg/kg	0.052	0.042	0.013	0.052	0.013	B587518
Total (Wet Wt) Molybdenum (Mo)	mg/kg	<0.0080	<0.0080	0.0080	<0.0080	0.0080	B587518
Total (Wet Wt) Nickel (Ni)	mg/kg	0.049	0.065	0.010	0.051	0.010	B587518
Total (Wet Wt) Phosphorus (P)	mg/kg	3290	3170	2.0	2930	2.0	B587518
Total (Wet Wt) Potassium (K)	mg/kg	4550	4720	2.5	4150	2.5	B587518
Total (Wet Wt) Selenium (Se)	mg/kg	0.433	0.369	0.010	0.468	0.010	B587518
Total (Wet Wt) Silver (Ag)	mg/kg	<0.0013	<0.0013	0.0013	<0.0013	0.0013	B587518
Total (Wet Wt) Sodium (Na)	mg/kg	455	419	2.5	401	2.5	B587518
Total (Wet Wt) Strontium (Sr)	mg/kg	0.366	0.285	0.013	0.148	0.013	B587518
Total (Wet Wt) Thallium (Tl)	mg/kg	0.00310	0.00195	0.00040	0.00237	0.00040	B587518
Total (Wet Wt) Tin (Sn)	mg/kg	<0.020	<0.020	0.020	<0.020	0.020	B587518
Total (Wet Wt) Titanium (Ti)	mg/kg	0.48	0.41	0.13	0.41	0.13	B587518
Total (Wet Wt) Uranium (U)	mg/kg	<0.00040	<0.00040	0.00040	<0.00040	0.00040	B587518
RDL = Reportable Detection Limit							



BUREAU  
VERITAS

Bureau Veritas Job #: C476093  
Report Date: 2024/11/12

WSP Canada Inc.  
Client Project #: CA0026317.6821.86000.04  
Site Location: BAFFINLAND IRON MINE  
Sampler Initials: DV

ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Bureau Veritas ID		CWI479	CWI480		CWI481		
Sampling Date		2024/08/07 12:54	2024/08/08 11:12		2024/08/08 11:12		
COC Number		08542426	08542426		08542426		
	UNITS	BAFF24UDPFARCH4002	BAFF24UIPFARCH4003	RDL	BAFF24UIPFARCH4004	RDL	QC Batch
Total (Wet Wt) Vanadium (V)	mg/kg	<0.020	<0.020	0.020	<0.020	0.020	B587518
Total (Wet Wt) Zinc (Zn)	mg/kg	6.28	6.91	0.20	6.88	0.20	B587518
RDL = Reportable Detection Limit							



## ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Bureau Veritas ID		CWI482	CWI483	CWI484		
Sampling Date		2024/08/08 11:12	2024/08/11 11:47	2024/08/11 11:47		
COC Number		08542426	08542426	08542426		
	UNITS	BAFF24UIPFARCH4005	BAFF24UIPFARCH4008	BAFF24UIPFARCH4010	RDL	QC Batch

## Mercury by CVAf

Total (Wet Wt) Mercury (Hg)	mg/kg	0.0483	0.0423	0.0335	0.0020	B588932
-----------------------------	-------	--------	--------	--------	--------	---------

## Total Metals by ICPMS

Total (Wet Wt) Aluminum (Al)	mg/kg	0.58	1.20	32.4	0.50	B588932
Total (Wet Wt) Antimony (Sb)	mg/kg	0.0031	0.0038	<0.0020	0.0020	B588932
Total (Wet Wt) Arsenic (As)	mg/kg	1.19	0.886	0.515	0.0050	B588932
Total (Wet Wt) Barium (Ba)	mg/kg	<0.010	<0.010	<0.010	0.010	B588932
Total (Wet Wt) Beryllium (Be)	mg/kg	<0.0020	<0.0020	<0.0020	0.0020	B588932
Total (Wet Wt) Bismuth (Bi)	mg/kg	<0.0013	<0.0013	<0.0013	0.0013	B588932
Total (Wet Wt) Boron (B)	mg/kg	<0.20	<0.20	<0.20	0.20	B588932
Total (Wet Wt) Cadmium (Cd)	mg/kg	0.0047	0.0033	0.0025	0.0013	B588932
Total (Wet Wt) Calcium (Ca)	mg/kg	75.2	83.0	80.9	4.0	B588932
Total (Wet Wt) Chromium (Cr)	mg/kg	<0.025	0.233	<0.025	0.025	B588932
Total (Wet Wt) Cobalt (Co)	mg/kg	0.0047	0.0039	0.0047	0.0013	B588932
Total (Wet Wt) Copper (Cu)	mg/kg	0.536	0.306	0.486	0.013	B588932
Total (Wet Wt) Iron (Fe)	mg/kg	4.06	5.69	2.35	0.25	B588932
Total (Wet Wt) Lead (Pb)	mg/kg	0.0017	0.0028	0.0137	0.0013	B588932
Total (Wet Wt) Magnesium (Mg)	mg/kg	264	297	337	0.40	B588932
Total (Wet Wt) Manganese (Mn)	mg/kg	0.068	0.087	0.125	0.010	B588932
Total (Wet Wt) Mercury (Hg)	mg/kg	0.039	0.035	0.027	0.013	B588932
Total (Wet Wt) Molybdenum (Mo)	mg/kg	<0.0080	0.0093	<0.0080	0.0080	B588932
Total (Wet Wt) Nickel (Ni)	mg/kg	<0.010	0.075	<0.010	0.010	B588932
Total (Wet Wt) Phosphorus (P)	mg/kg	2740	2900	3150	2.0	B588932
Total (Wet Wt) Potassium (K)	mg/kg	3910	4590	4960	2.5	B588932
Total (Wet Wt) Selenium (Se)	mg/kg	0.308	0.358	0.304	0.010	B588932
Total (Wet Wt) Silver (Ag)	mg/kg	<0.0013	<0.0013	<0.0013	0.0013	B588932
Total (Wet Wt) Sodium (Na)	mg/kg	431	386	315	2.5	B588932
Total (Wet Wt) Strontium (Sr)	mg/kg	0.129	0.134	0.145	0.013	B588932
Total (Wet Wt) Thallium (Tl)	mg/kg	0.00147	0.00187	0.00192	0.00040	B588932
Total (Wet Wt) Tin (Sn)	mg/kg	<0.020	<0.020	<0.020	0.020	B588932
Total (Wet Wt) Titanium (Ti)	mg/kg	0.37	0.37	0.36	0.13	B588932
Total (Wet Wt) Uranium (U)	mg/kg	<0.00040	<0.00040	<0.00040	0.00040	B588932

RDL = Reportable Detection Limit



ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Bureau Veritas ID		CWI482	CWI483	CWI484		
Sampling Date		2024/08/08 11:12	2024/08/11 11:47	2024/08/11 11:47		
COC Number		08542426	08542426	08542426		
	UNITS	BAFF24UIPFARCH4005	BAFF24UIPFARCH4008	BAFF24UIPFARCH4010	RDL	QC Batch
Total (Wet Wt) Vanadium (V)	mg/kg	<0.020	<0.020	<0.020	0.020	B588932
Total (Wet Wt) Zinc (Zn)	mg/kg	4.19	4.02	5.00	0.20	B588932
RDL = Reportable Detection Limit						



BUREAU  
VERITAS

Bureau Veritas Job #: C476093  
Report Date: 2024/11/12

WSP Canada Inc.  
Client Project #: CA0026317.6821.86000.04  
Site Location: BAFFINLAND IRON MINE  
Sampler Initials: DV

### ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

<b>Bureau Veritas ID</b>		CWI485		
<b>Sampling Date</b>		2024/08/17 12:35		
<b>COC Number</b>		08542426		
	<b>UNITS</b>	<b>BAFF24UIPFARCH4012</b>	<b>RDL</b>	<b>QC Batch</b>
<b>Mercury by CVAf</b>				
Total (Wet Wt) Mercury (Hg)	mg/kg	0.142	0.0010	B588932
<b>Total Metals by ICPMS</b>				
Total (Wet Wt) Aluminum (Al)	mg/kg	1.43	0.50	B588932
Total (Wet Wt) Antimony (Sb)	mg/kg	0.0045	0.0020	B588932
Total (Wet Wt) Arsenic (As)	mg/kg	0.764	0.0050	B588932
Total (Wet Wt) Barium (Ba)	mg/kg	0.013	0.010	B588932
Total (Wet Wt) Beryllium (Be)	mg/kg	<0.0020	0.0020	B588932
Total (Wet Wt) Bismuth (Bi)	mg/kg	<0.0013	0.0013	B588932
Total (Wet Wt) Boron (B)	mg/kg	<0.20	0.20	B588932
Total (Wet Wt) Cadmium (Cd)	mg/kg	0.0228	0.0013	B588932
Total (Wet Wt) Calcium (Ca)	mg/kg	111	4.0	B588932
Total (Wet Wt) Chromium (Cr)	mg/kg	<0.025	0.025	B588932
Total (Wet Wt) Cobalt (Co)	mg/kg	0.0058	0.0013	B588932
Total (Wet Wt) Copper (Cu)	mg/kg	0.282	0.013	B588932
Total (Wet Wt) Iron (Fe)	mg/kg	5.99	0.25	B588932
Total (Wet Wt) Lead (Pb)	mg/kg	0.0063	0.0013	B588932
Total (Wet Wt) Magnesium (Mg)	mg/kg	317	0.40	B588932
Total (Wet Wt) Manganese (Mn)	mg/kg	0.096	0.010	B588932
Total (Wet Wt) Mercury (Hg)	mg/kg	0.115	0.013	B588932
Total (Wet Wt) Molybdenum (Mo)	mg/kg	<0.0080	0.0080	B588932
Total (Wet Wt) Nickel (Ni)	mg/kg	0.012	0.010	B588932
Total (Wet Wt) Phosphorus (P)	mg/kg	3050	2.0	B588932
Total (Wet Wt) Potassium (K)	mg/kg	4650	2.5	B588932
Total (Wet Wt) Selenium (Se)	mg/kg	0.448	0.010	B588932
Total (Wet Wt) Silver (Ag)	mg/kg	<0.0013	0.0013	B588932
Total (Wet Wt) Sodium (Na)	mg/kg	394	2.5	B588932
Total (Wet Wt) Strontium (Sr)	mg/kg	0.137	0.013	B588932
Total (Wet Wt) Thallium (Tl)	mg/kg	0.00476	0.00040	B588932
Total (Wet Wt) Tin (Sn)	mg/kg	<0.020	0.020	B588932
Total (Wet Wt) Titanium (Ti)	mg/kg	0.51	0.13	B588932
Total (Wet Wt) Uranium (U)	mg/kg	<0.00040	0.00040	B588932
RDL = Reportable Detection Limit				



BUREAU  
VERITAS

Bureau Veritas Job #: C476093  
Report Date: 2024/11/12

WSP Canada Inc.  
Client Project #: CA0026317.6821.86000.04  
Site Location: BAFFINLAND IRON MINE  
Sampler Initials: DV

ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Bureau Veritas ID		CWI485		
Sampling Date		2024/08/17 12:35		
COC Number		08542426		
	UNITS	BAFF24UIPFARCH4012	RDL	QC Batch
Total (Wet Wt) Vanadium (V)	mg/kg	<0.020	0.020	B588932
Total (Wet Wt) Zinc (Zn)	mg/kg	4.54	0.20	B588932
RDL = Reportable Detection Limit				





BUREAU  
VERITAS

Bureau Veritas Job #: C476093

Report Date: 2024/11/12

WSP Canada Inc.

Client Project #: CA0026317.6821.86000.04

Site Location: BAFFINLAND IRON MINE

Sampler Initials: DV

### PHYSICAL TESTING (TISSUE)

Bureau Veritas ID		CWI462	CWI463	CWI464	CWI465		
Sampling Date		2024/08/04 12:10	2024/08/04 14:18	2024/08/04 14:47	2024/08/04 14:56		
COC Number		08542425	08542425	08542425	08542425		
	UNITS	BAFF24UDPFFHSC1004	BAFF24UDPFFHSC1012	BAFF24UDPFFHSC1015	BAFF24UDPFFHSC1016	RDL	QC Batch

#### Physical Properties

Sample Wet Weight	%	0.28	0.32	0.23	0.24	N/A	B587519
Moisture	%	77	80	78	77	0.30	B587519

RDL = Reportable Detection Limit

N/A = Not Applicable

Bureau Veritas ID		CWI466	CWI467	CWI468	CWI469		
Sampling Date		2024/08/04 16:20	2024/08/05 14:52	2024/08/08 16:53	2024/08/08 17:13		
COC Number		08542425	08542425	08542425	08542425		
	UNITS	BAFF24UDPFFHSC1023	BAFF24UDPFFHSC1034	BAFF24UIPFFHSC1038	BAFF24UIPFFHSC1040	RDL	QC Batch

#### Physical Properties

Sample Wet Weight	%	0.33	0.26	0.38	0.38	N/A	B587519
Moisture	%	73	79	81	76	0.30	B587519

RDL = Reportable Detection Limit

N/A = Not Applicable

Bureau Veritas ID		CWI470	CWI471	CWI472	CWI473		
Sampling Date		2024/08/03 17:10	2024/08/03 17:30	2024/08/03 17:39	2024/08/09 16:23		
COC Number		08542424	08542424	08542424	08542424		
	UNITS	BAFF24UKLKFHSC2002	BAFF24UKLKFHSC2004	BAFF24UKLKFHSC2005	BAFF24UKLKFHSC2015	RDL	QC Batch

#### Physical Properties

Sample Wet Weight	%	0.28	0.21	0.25	0.31	N/A	B587519
Moisture	%	79	88	79	76	0.30	B587519

RDL = Reportable Detection Limit

N/A = Not Applicable

Bureau Veritas ID		CWI474	CWI475	CWI476	CWI477		
Sampling Date		2024/08/09 16:49	2024/08/09 17:59	2024/08/09 18:20	2024/08/16 17:20		
COC Number		08542424	08542424	08542424	08542424		
	UNITS	BAFF24UKLKFHSC2019	BAFF24UKLKFHSC2031	BAFF24UKLKFHSC2035	BAFF24UKLKFHSC2037	RDL	QC Batch

#### Physical Properties

Sample Wet Weight	%	0.34	0.36	0.28	0.26	N/A	B587519
Moisture	%	76	75	74	75	0.30	B587519

RDL = Reportable Detection Limit

N/A = Not Applicable



### PHYSICAL TESTING (TISSUE)

Bureau Veritas ID		CWI478	CWI479	CWI480		
Sampling Date		2024/08/01 10:41	2024/08/07 12:54	2024/08/08 11:12		
COC Number		08542426	08542426	08542426		
	UNITS	BAFF23UDPFARCH4001	BAFF24UDPFARCH4002	BAFF24UIPFARCH4003	RDL	QC Batch
Physical Properties						
Sample Wet Weight	%	0.31	0.27	0.22	N/A	B587519
Moisture	%	73	70	72	0.30	B587519
RDL = Reportable Detection Limit N/A = Not Applicable						

Bureau Veritas ID		CWI481		CWI482	CWI483		
Sampling Date		2024/08/08 11:12		2024/08/08 11:12	2024/08/11 11:47		
COC Number		08542426		08542426	08542426		
	UNITS	BAFF24UIPFARCH4004	QC Batch	BAFF24UIPFARCH4005	BAFF24UIPFARCH4008	RDL	QC Batch
Physical Properties							
Sample Wet Weight	%	0.21	B587519	0.25	0.25	N/A	B588976
Moisture	%	66	B587519	64	71	0.30	B588976
RDL = Reportable Detection Limit N/A = Not Applicable							

Bureau Veritas ID		CWI484	CWI485		
Sampling Date		2024/08/11 11:47	2024/08/17 12:35		
COC Number		08542426	08542426		
	UNITS	BAFF24UIPFARCH4010	BAFF24UIPFARCH4012	RDL	QC Batch
Physical Properties					
Sample Wet Weight	%	0.27	0.29	N/A	B588976
Moisture	%	73	73	0.30	B588976
RDL = Reportable Detection Limit N/A = Not Applicable					



**BUREAU  
VERITAS**

Bureau Veritas Job #: C476093  
Report Date: 2024/11/12

WSP Canada Inc.  
Client Project #: CA0026317.6821.86000.04  
Site Location: BAFFINLAND IRON MINE  
Sampler Initials: DV

## GENERAL COMMENTS

Results relate only to the items tested.



BUREAU  
VERITAS

Bureau Veritas Job #: C476093

Report Date: 2024/11/12

WSP Canada Inc.

Client Project #: CA0026317.6821.86000.04

Site Location: BAFFINLAND IRON MINE

Sampler Initials: DV

## QUALITY ASSURANCE REPORT

QA/QC								
Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B587518	MEM	QC Standard	Total (Wet Wt) Antimony (Sb)	2024/11/03		98	%	N/A
			Total (Wet Wt) Arsenic (As)	2024/11/03		88	%	N/A
			Total (Wet Wt) Cadmium (Cd)	2024/11/03		90	%	N/A
			Total (Wet Wt) Calcium (Ca)	2024/11/03		91	%	N/A
			Total (Wet Wt) Cobalt (Co)	2024/11/03		85	%	N/A
			Total (Wet Wt) Copper (Cu)	2024/11/03		90	%	N/A
			Total (Wet Wt) Iron (Fe)	2024/11/03		95	%	N/A
			Total (Wet Wt) Lead (Pb)	2024/11/03		89	%	N/A
			Total (Wet Wt) Manganese (Mn)	2024/11/03		90	%	N/A
			Total (Wet Wt) Mercury (Hg)	2024/11/03		78	%	N/A
			Total (Wet Wt) Molybdenum (Mo)	2024/11/03		88	%	N/A
			Total (Wet Wt) Phosphorus (P)	2024/11/03		96	%	N/A
			Total (Wet Wt) Potassium (K)	2024/11/03		97	%	N/A
			Total (Wet Wt) Selenium (Se)	2024/11/03		84	%	N/A
			Total (Wet Wt) Silver (Ag)	2024/11/03		87	%	N/A
			Total (Wet Wt) Sodium (Na)	2024/11/03		99	%	N/A
			Total (Wet Wt) Strontium (Sr)	2024/11/03		90	%	N/A
			Total (Wet Wt) Thallium (Tl)	2024/11/03		93	%	N/A
			Total (Wet Wt) Tin (Sn)	2024/11/03		77	%	N/A
			Total (Wet Wt) Uranium (U)	2024/11/03		92	%	N/A
			Total (Wet Wt) Vanadium (V)	2024/11/03		79	%	N/A
			Total (Wet Wt) Zinc (Zn)	2024/11/03		90	%	N/A
B587518	MEM	Spiked Blank	Total (Wet Wt) Aluminum (Al)	2024/11/03		104	%	80 - 120
			Total (Wet Wt) Antimony (Sb)	2024/11/03		95	%	80 - 120
			Total (Wet Wt) Arsenic (As)	2024/11/03		101	%	80 - 120
			Total (Wet Wt) Barium (Ba)	2024/11/03		96	%	80 - 120
			Total (Wet Wt) Beryllium (Be)	2024/11/03		95	%	80 - 120
			Total (Wet Wt) Bismuth (Bi)	2024/11/03		96	%	80 - 120
			Total (Wet Wt) Boron (B)	2024/11/03		100	%	80 - 120
			Total (Wet Wt) Cadmium (Cd)	2024/11/03		95	%	80 - 120
			Total (Wet Wt) Calcium (Ca)	2024/11/03		101	%	80 - 120
			Total (Wet Wt) Chromium (Cr)	2024/11/03		98	%	80 - 120
			Total (Wet Wt) Cobalt (Co)	2024/11/03		98	%	80 - 120
			Total (Wet Wt) Copper (Cu)	2024/11/03		96	%	80 - 120
			Total (Wet Wt) Iron (Fe)	2024/11/03		101	%	80 - 120
			Total (Wet Wt) Lead (Pb)	2024/11/03		93	%	80 - 120
			Total (Wet Wt) Magnesium (Mg)	2024/11/03		101	%	80 - 120
			Total (Wet Wt) Manganese (Mn)	2024/11/03		98	%	80 - 120
			Total (Wet Wt) Mercury (Hg)	2024/11/03		103	%	80 - 120
			Total (Wet Wt) Molybdenum (Mo)	2024/11/03		100	%	80 - 120
			Total (Wet Wt) Nickel (Ni)	2024/11/03		97	%	80 - 120
			Total (Wet Wt) Phosphorus (P)	2024/11/03		105	%	80 - 120
			Total (Wet Wt) Potassium (K)	2024/11/03		102	%	80 - 120
			Total (Wet Wt) Selenium (Se)	2024/11/03		99	%	80 - 120
			Total (Wet Wt) Silver (Ag)	2024/11/03		97	%	80 - 120
			Total (Wet Wt) Sodium (Na)	2024/11/03		101	%	80 - 120
			Total (Wet Wt) Strontium (Sr)	2024/11/03		95	%	80 - 120
			Total (Wet Wt) Thallium (Tl)	2024/11/03		95	%	80 - 120
			Total (Wet Wt) Tin (Sn)	2024/11/03		98	%	80 - 120
			Total (Wet Wt) Titanium (Ti)	2024/11/03		101	%	80 - 120
			Total (Wet Wt) Uranium (U)	2024/11/03		97	%	80 - 120
			Total (Wet Wt) Vanadium (V)	2024/11/03		98	%	80 - 120
			Total (Wet Wt) Zinc (Zn)	2024/11/03		97	%	80 - 120



BUREAU  
VERITAS

Bureau Veritas Job #: C476093  
Report Date: 2024/11/12

WSP Canada Inc.  
Client Project #: CA0026317.6821.86000.04  
Site Location: BAFFINLAND IRON MINE  
Sampler Initials: DV

### QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B587518	MEM	Method Blank		Total (Wet Wt) Aluminum (Al)	2024/11/03	<0.50		mg/kg	
				Total (Wet Wt) Antimony (Sb)	2024/11/03	<0.0020		mg/kg	
				Total (Wet Wt) Arsenic (As)	2024/11/03	<0.0050		mg/kg	
				Total (Wet Wt) Barium (Ba)	2024/11/03	<0.010		mg/kg	
				Total (Wet Wt) Beryllium (Be)	2024/11/03	<0.0020		mg/kg	
				Total (Wet Wt) Bismuth (Bi)	2024/11/03	<0.0013		mg/kg	
				Total (Wet Wt) Boron (B)	2024/11/03	<0.20		mg/kg	
				Total (Wet Wt) Cadmium (Cd)	2024/11/03	<0.0013		mg/kg	
				Total (Wet Wt) Calcium (Ca)	2024/11/03	<4.0		mg/kg	
				Total (Wet Wt) Chromium (Cr)	2024/11/03	<0.025		mg/kg	
				Total (Wet Wt) Cobalt (Co)	2024/11/03	<0.0013		mg/kg	
				Total (Wet Wt) Copper (Cu)	2024/11/03	<0.013		mg/kg	
				Total (Wet Wt) Iron (Fe)	2024/11/03	<0.25		mg/kg	
				Total (Wet Wt) Lead (Pb)	2024/11/03	<0.0013		mg/kg	
				Total (Wet Wt) Magnesium (Mg)	2024/11/03	<0.40		mg/kg	
				Total (Wet Wt) Manganese (Mn)	2024/11/03	<0.010		mg/kg	
				Total (Wet Wt) Mercury (Hg)	2024/11/03	<0.013		mg/kg	
				Total (Wet Wt) Molybdenum (Mo)	2024/11/03	<0.0080		mg/kg	
				Total (Wet Wt) Nickel (Ni)	2024/11/03	<0.010		mg/kg	
				Total (Wet Wt) Phosphorus (P)	2024/11/03	<2.0		mg/kg	
				Total (Wet Wt) Potassium (K)	2024/11/03	<2.5		mg/kg	
				Total (Wet Wt) Selenium (Se)	2024/11/03	<0.010		mg/kg	
				Total (Wet Wt) Silver (Ag)	2024/11/03	<0.0013		mg/kg	
				Total (Wet Wt) Sodium (Na)	2024/11/03	<2.5		mg/kg	
				Total (Wet Wt) Strontium (Sr)	2024/11/03	<0.013		mg/kg	
				Total (Wet Wt) Thallium (Tl)	2024/11/03	<0.00040		mg/kg	
				Total (Wet Wt) Tin (Sn)	2024/11/03	<0.020		mg/kg	
				Total (Wet Wt) Titanium (Ti)	2024/11/03	<0.13		mg/kg	
				Total (Wet Wt) Uranium (U)	2024/11/03	<0.00040		mg/kg	
				Total (Wet Wt) Vanadium (V)	2024/11/03	<0.020		mg/kg	
				Total (Wet Wt) Zinc (Zn)	2024/11/03	<0.20		mg/kg	
B587518	MEM	RPD [CWI462-01]		Total (Wet Wt) Aluminum (Al)	2024/11/03	16		%	40
				Total (Wet Wt) Antimony (Sb)	2024/11/03	22		%	40
				Total (Wet Wt) Arsenic (As)	2024/11/03	9.1		%	40
				Total (Wet Wt) Barium (Ba)	2024/11/03	24		%	40
				Total (Wet Wt) Beryllium (Be)	2024/11/03	NC		%	40
				Total (Wet Wt) Bismuth (Bi)	2024/11/03	9.5		%	40
				Total (Wet Wt) Boron (B)	2024/11/03	NC		%	40
				Total (Wet Wt) Cadmium (Cd)	2024/11/03	5.9		%	40
				Total (Wet Wt) Calcium (Ca)	2024/11/03	3.7		%	60
				Total (Wet Wt) Chromium (Cr)	2024/11/03	NC		%	40
				Total (Wet Wt) Cobalt (Co)	2024/11/03	2.5		%	40
				Total (Wet Wt) Copper (Cu)	2024/11/03	6.4		%	40
				Total (Wet Wt) Iron (Fe)	2024/11/03	4.7		%	40
				Total (Wet Wt) Lead (Pb)	2024/11/03	20		%	40
				Total (Wet Wt) Magnesium (Mg)	2024/11/03	6.4		%	40
				Total (Wet Wt) Manganese (Mn)	2024/11/03	5.9		%	40
				Total (Wet Wt) Mercury (Hg)	2024/11/03	8.5		%	40
				Total (Wet Wt) Molybdenum (Mo)	2024/11/03	NC		%	40
				Total (Wet Wt) Nickel (Ni)	2024/11/03	8.2		%	40
				Total (Wet Wt) Phosphorus (P)	2024/11/03	8.1		%	40
				Total (Wet Wt) Potassium (K)	2024/11/03	4.4		%	40
				Total (Wet Wt) Selenium (Se)	2024/11/03	7.6		%	40



**BUREAU  
VERITAS**

Bureau Veritas Job #: C476093

Report Date: 2024/11/12

WSP Canada Inc.

Client Project #: CA0026317.6821.86000.04

Site Location: BAFFINLAND IRON MINE

Sampler Initials: DV

### QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B587519	CG5	RPD [CWI462-01]	Total (Wet Wt) Silver (Ag)	2024/11/03	NC		%	40
			Total (Wet Wt) Sodium (Na)	2024/11/03	5.1		%	40
			Total (Wet Wt) Strontium (Sr)	2024/11/03	5.1		%	60
			Total (Wet Wt) Thallium (Tl)	2024/11/03	0.95		%	40
			Total (Wet Wt) Tin (Sn)	2024/11/03	NC		%	40
			Total (Wet Wt) Titanium (Ti)	2024/11/03	0.33		%	40
			Total (Wet Wt) Uranium (U)	2024/11/03	NC		%	40
			Total (Wet Wt) Vanadium (V)	2024/11/03	NC		%	40
			Total (Wet Wt) Zinc (Zn)	2024/11/03	5.7		%	40
			Sample Wet Weight	2024/10/31	3.8		%	N/A
B588932	MEM	QC Standard	Moisture	2024/10/31	1.2		%	20
			Total (Wet Wt) Antimony (Sb)	2024/11/03		136 (1)	%	75 - 125
			Total (Wet Wt) Arsenic (As)	2024/11/03		113	%	75 - 125
			Total (Wet Wt) Cadmium (Cd)	2024/11/03		115	%	75 - 125
			Total (Wet Wt) Calcium (Ca)	2024/11/03		117	%	75 - 125
			Total (Wet Wt) Cobalt (Co)	2024/11/03		114	%	75 - 125
			Total (Wet Wt) Copper (Cu)	2024/11/03		117	%	75 - 125
			Total (Wet Wt) Iron (Fe)	2024/11/03		122	%	75 - 125
			Total (Wet Wt) Lead (Pb)	2024/11/03		112	%	75 - 125
			Total (Wet Wt) Manganese (Mn)	2024/11/03		118	%	75 - 125
			Total (Wet Wt) Mercury (Hg)	2024/11/03		106	%	59 - 141
			Total (Wet Wt) Molybdenum (Mo)	2024/11/03		119	%	75 - 125
			Total (Wet Wt) Phosphorus (P)	2024/11/03		118	%	75 - 125
			Total (Wet Wt) Potassium (K)	2024/11/03		126 (1)	%	75 - 125
			Total (Wet Wt) Selenium (Se)	2024/11/03		112	%	75 - 125
			Total (Wet Wt) Silver (Ag)	2024/11/03		114	%	75 - 125
			Total (Wet Wt) Sodium (Na)	2024/11/03		127 (1)	%	75 - 125
			Total (Wet Wt) Strontium (Sr)	2024/11/03		117	%	75 - 125
			Total (Wet Wt) Thallium (Tl)	2024/11/03		109	%	75 - 125
			Total (Wet Wt) Tin (Sn)	2024/11/03		138 (1)	%	75 - 125
			Total (Wet Wt) Uranium (U)	2024/11/03		119	%	75 - 125
			Total (Wet Wt) Vanadium (V)	2024/11/03		108	%	75 - 125
			Total (Wet Wt) Zinc (Zn)	2024/11/03		118	%	75 - 125
			Total (Wet Wt) Aluminum (Al)	2024/11/03		101	%	80 - 120
			Total (Wet Wt) Antimony (Sb)	2024/11/03		99	%	80 - 120
			Total (Wet Wt) Arsenic (As)	2024/11/03		98	%	80 - 120
			Total (Wet Wt) Barium (Ba)	2024/11/03		97	%	80 - 120
			Total (Wet Wt) Beryllium (Be)	2024/11/03		94	%	80 - 120
			Total (Wet Wt) Bismuth (Bi)	2024/11/03		96	%	80 - 120
			Total (Wet Wt) Boron (B)	2024/11/03		98	%	80 - 120
B588932	MEM	Spiked Blank	Total (Wet Wt) Cadmium (Cd)	2024/11/03		95	%	80 - 120
			Total (Wet Wt) Calcium (Ca)	2024/11/03		102	%	80 - 120
			Total (Wet Wt) Chromium (Cr)	2024/11/03		96	%	80 - 120
			Total (Wet Wt) Cobalt (Co)	2024/11/03		96	%	80 - 120
			Total (Wet Wt) Copper (Cu)	2024/11/03		94	%	80 - 120
			Total (Wet Wt) Iron (Fe)	2024/11/03		101	%	80 - 120
			Total (Wet Wt) Lead (Pb)	2024/11/03		93	%	80 - 120
			Total (Wet Wt) Magnesium (Mg)	2024/11/03		99	%	80 - 120
			Total (Wet Wt) Manganese (Mn)	2024/11/03		96	%	80 - 120
			Total (Wet Wt) Mercury (Hg)	2024/11/03		104	%	80 - 120
			Total (Wet Wt) Molybdenum (Mo)	2024/11/03		104	%	80 - 120
			Total (Wet Wt) Nickel (Ni)	2024/11/03		95	%	80 - 120
			Total (Wet Wt) Phosphorus (P)	2024/11/03		102	%	80 - 120



BUREAU  
VERITAS

Bureau Veritas Job #: C476093

Report Date: 2024/11/12

WSP Canada Inc.

Client Project #: CA0026317.6821.86000.04

Site Location: BAFFINLAND IRON MINE

Sampler Initials: DV

### QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B588932	MEM	Method Blank	Total (Wet Wt) Potassium (K)	2024/11/03		98	%	80 - 120
			Total (Wet Wt) Selenium (Se)	2024/11/03		95	%	80 - 120
			Total (Wet Wt) Silver (Ag)	2024/11/03		96	%	80 - 120
			Total (Wet Wt) Sodium (Na)	2024/11/03		99	%	80 - 120
			Total (Wet Wt) Strontium (Sr)	2024/11/03		96	%	80 - 120
			Total (Wet Wt) Thallium (Tl)	2024/11/03		96	%	80 - 120
			Total (Wet Wt) Tin (Sn)	2024/11/03		97	%	80 - 120
			Total (Wet Wt) Titanium (Ti)	2024/11/03		97	%	80 - 120
			Total (Wet Wt) Uranium (U)	2024/11/03		96	%	80 - 120
			Total (Wet Wt) Vanadium (V)	2024/11/03		95	%	80 - 120
			Total (Wet Wt) Zinc (Zn)	2024/11/03		97	%	80 - 120
			Total (Wet Wt) Aluminum (Al)	2024/11/03	<0.50		mg/kg	
			Total (Wet Wt) Antimony (Sb)	2024/11/03	<0.0020		mg/kg	
			Total (Wet Wt) Arsenic (As)	2024/11/03	<0.0050		mg/kg	
			Total (Wet Wt) Barium (Ba)	2024/11/03	<0.010		mg/kg	
			Total (Wet Wt) Beryllium (Be)	2024/11/03	<0.0020		mg/kg	
			Total (Wet Wt) Bismuth (Bi)	2024/11/03	<0.0013		mg/kg	
			Total (Wet Wt) Boron (B)	2024/11/03	<0.20		mg/kg	
			Total (Wet Wt) Cadmium (Cd)	2024/11/03	<0.0013		mg/kg	
			Total (Wet Wt) Calcium (Ca)	2024/11/03	<4.0		mg/kg	
			Total (Wet Wt) Chromium (Cr)	2024/11/03	<0.025		mg/kg	
			Total (Wet Wt) Cobalt (Co)	2024/11/03	<0.0013		mg/kg	
			Total (Wet Wt) Copper (Cu)	2024/11/03	<0.013		mg/kg	
			Total (Wet Wt) Iron (Fe)	2024/11/03	<0.25		mg/kg	
			Total (Wet Wt) Lead (Pb)	2024/11/03	<0.0013		mg/kg	
			Total (Wet Wt) Magnesium (Mg)	2024/11/03	<0.40		mg/kg	
			Total (Wet Wt) Manganese (Mn)	2024/11/03	<0.010		mg/kg	
			Total (Wet Wt) Mercury (Hg)	2024/11/03	<0.013		mg/kg	
			Total (Wet Wt) Molybdenum (Mo)	2024/11/03	<0.0080		mg/kg	
			Total (Wet Wt) Nickel (Ni)	2024/11/03	<0.010		mg/kg	
			Total (Wet Wt) Phosphorus (P)	2024/11/03	<2.0		mg/kg	
			Total (Wet Wt) Potassium (K)	2024/11/03	<2.5		mg/kg	
			Total (Wet Wt) Selenium (Se)	2024/11/03	<0.010		mg/kg	
			Total (Wet Wt) Silver (Ag)	2024/11/03	<0.0013		mg/kg	
			Total (Wet Wt) Sodium (Na)	2024/11/03	<2.5		mg/kg	
			Total (Wet Wt) Strontium (Sr)	2024/11/03	<0.013		mg/kg	
			Total (Wet Wt) Thallium (Tl)	2024/11/03	<0.00040		mg/kg	
			Total (Wet Wt) Tin (Sn)	2024/11/03	<0.020		mg/kg	
			Total (Wet Wt) Titanium (Ti)	2024/11/03	<0.13		mg/kg	
			Total (Wet Wt) Uranium (U)	2024/11/03	<0.00040		mg/kg	
			Total (Wet Wt) Vanadium (V)	2024/11/03	<0.020		mg/kg	
			Total (Wet Wt) Zinc (Zn)	2024/11/03	<0.20		mg/kg	
B588932	MEM	RPD [CWI482-01]	Total (Wet Wt) Aluminum (Al)	2024/11/03	NC		%	40
			Total (Wet Wt) Antimony (Sb)	2024/11/03	40		%	40
			Total (Wet Wt) Arsenic (As)	2024/11/03	8.2		%	40
			Total (Wet Wt) Barium (Ba)	2024/11/03	NC		%	40
			Total (Wet Wt) Beryllium (Be)	2024/11/03	NC		%	40
			Total (Wet Wt) Bismuth (Bi)	2024/11/03	NC		%	40
			Total (Wet Wt) Boron (B)	2024/11/03	NC		%	40
			Total (Wet Wt) Cadmium (Cd)	2024/11/03	30		%	40
			Total (Wet Wt) Calcium (Ca)	2024/11/03	9.2		%	60
			Total (Wet Wt) Chromium (Cr)	2024/11/03	NC		%	40
			Total (Wet Wt) Cobalt (Co)	2024/11/03	11		%	40





BUREAU  
VERITAS

Bureau Veritas Job #: C476093

Report Date: 2024/11/12

WSP Canada Inc.

Client Project #: CA0026317.6821.86000.04

Site Location: BAFFINLAND IRON MINE

Sampler Initials: DV

### QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total (Wet Wt) Copper (Cu)	2024/11/03	7.0		%	40
			Total (Wet Wt) Iron (Fe)	2024/11/03	7.1		%	40
			Total (Wet Wt) Lead (Pb)	2024/11/03	4.3		%	40
			Total (Wet Wt) Magnesium (Mg)	2024/11/03	7.8		%	40
			Total (Wet Wt) Manganese (Mn)	2024/11/03	12		%	40
			Total (Wet Wt) Mercury (Hg)	2024/11/03	6.9		%	40
			Total (Wet Wt) Molybdenum (Mo)	2024/11/03	NC		%	40
			Total (Wet Wt) Nickel (Ni)	2024/11/03	NC		%	40
			Total (Wet Wt) Phosphorus (P)	2024/11/03	9.4		%	40
			Total (Wet Wt) Potassium (K)	2024/11/03	6.5		%	40
			Total (Wet Wt) Selenium (Se)	2024/11/03	8.6		%	40
			Total (Wet Wt) Silver (Ag)	2024/11/03	NC		%	40
			Total (Wet Wt) Sodium (Na)	2024/11/03	11		%	40
			Total (Wet Wt) Strontium (Sr)	2024/11/03	18		%	60
			Total (Wet Wt) Thallium (Tl)	2024/11/03	2.8		%	40
			Total (Wet Wt) Tin (Sn)	2024/11/03	NC		%	40
			Total (Wet Wt) Titanium (Ti)	2024/11/03	22		%	40
			Total (Wet Wt) Uranium (U)	2024/11/03	NC		%	40
			Total (Wet Wt) Vanadium (V)	2024/11/03	NC		%	40
			Total (Wet Wt) Zinc (Zn)	2024/11/03	6.3		%	40
B588976	CG5	RPD [CWI482-01]	Sample Wet Weight	2024/10/31	6.4		%	N/A
			Moisture	2024/10/31	2.7		%	20
B589198	RLC	QC Standard	Total (Wet Wt) Mercury (Hg)	2024/11/05		83	%	N/A
B589198	RLC	Spiked Blank	Total (Wet Wt) Mercury (Hg)	2024/11/05		97	%	80 - 120
B589198	RLC	Method Blank	Total (Wet Wt) Mercury (Hg)	2024/11/05	<0.0020		mg/kg	
B589198	RLC	RPD [CWI462-01]	Total (Wet Wt) Mercury (Hg)	2024/11/05	4.9		%	40
B589217	RLC	Matrix Spike [CWI482-01]	Total (Wet Wt) Mercury (Hg)	2024/11/08		85	%	80 - 120
B589217	RLC	QC Standard	Total (Wet Wt) Mercury (Hg)	2024/11/08		130	%	59 - 141
B589217	RLC	Spiked Blank	Total (Wet Wt) Mercury (Hg)	2024/11/08		106	%	80 - 120
B589217	RLC	Method Blank	Total (Wet Wt) Mercury (Hg)	2024/11/08	<0.0010		mg/kg	
B589217	RLC	RPD [CWI482-01]	Total (Wet Wt) Mercury (Hg)	2024/11/08	7.6		%	40
B593974	BCZ	Reagent Blank	1-Methylnaphthalene	2024/10/29	<0.050		mg/kg	
			2-Methylnaphthalene	2024/10/29	<0.050		mg/kg	
			Benzo(j)fluoranthene	2024/10/29	<0.050		mg/kg	
			D10-ANTHRACENE (sur.)	2024/10/29		100	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2024/10/29		98	%	50 - 130
			Perylene	2024/10/29	<0.050		mg/kg	
			TERPHENYL-D14 (sur.)	2024/10/29		100	%	50 - 130
			Naphthalene	2024/10/29	<0.050		mg/kg	
			Acenaphthylene	2024/10/29	<0.050		mg/kg	
			Acenaphthene	2024/10/29	<0.050		mg/kg	
			Fluorene	2024/10/29	<0.050		mg/kg	
			Phenanthrene	2024/10/29	<0.050		mg/kg	
			Anthracene	2024/10/29	<0.050		mg/kg	
			Fluoranthene	2024/10/29	<0.050		mg/kg	
			Pyrene	2024/10/29	<0.050		mg/kg	
			Benzo(a)anthracene	2024/10/29	<0.050		mg/kg	
			Chrysene	2024/10/29	<0.050		mg/kg	
			Benzo(b)fluoranthene	2024/10/29	<0.050		mg/kg	
			Benzo(k)fluoranthene	2024/10/29	<0.050		mg/kg	
			Benzo(a)pyrene	2024/10/29	<0.050		mg/kg	
			Indeno(1,2,3-cd)pyrene	2024/10/29	<0.050		mg/kg	
			Dibenz(a,h)anthracene	2024/10/29	<0.050		mg/kg	





BUREAU  
VERITAS

Bureau Veritas Job #: C476093  
Report Date: 2024/11/12

WSP Canada Inc.  
Client Project #: CA0026317.6821.86000.04  
Site Location: BAFFINLAND IRON MINE  
Sampler Initials: DV

### QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B593974	BCZ	Matrix Spike [CWI483-02]	Benzo(g,h,i)perylene	2024/10/29	<0.050		mg/kg	
			1-Methylnaphthalene	2024/10/29		90	%	50 - 130
			2-Methylnaphthalene	2024/10/29		99	%	50 - 130
			Benzo(j)fluoranthene	2024/10/29		93	%	50 - 130
			D10-ANTHRACENE (sur.)	2024/10/29		92	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2024/10/29		91	%	50 - 130
			Perylene	2024/10/29		82	%	50 - 130
			TERPHENYL-D14 (sur.)	2024/10/29		99	%	50 - 130
			Naphthalene	2024/10/29		91	%	50 - 130
			Acenaphthylene	2024/10/29		87	%	50 - 130
			Acenaphthene	2024/10/29		92	%	50 - 130
			Fluorene	2024/10/29		92	%	50 - 130
			Phenanthrene	2024/10/29		99	%	50 - 130
			Anthracene	2024/10/29		86	%	50 - 130
			Fluoranthene	2024/10/29		88	%	50 - 130
			Pyrene	2024/10/29		88	%	50 - 130
			Benzo(a)anthracene	2024/10/29		84	%	50 - 130
			Chrysene	2024/10/29		100	%	50 - 130
			Benzo(b)fluoranthene	2024/10/29		91	%	50 - 130
			Benzo(k)fluoranthene	2024/10/29		91	%	50 - 130
			Benzo(a)pyrene	2024/10/29		90	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2024/10/29		85	%	50 - 130
			Dibenz(a,h)anthracene	2024/10/29		89	%	50 - 130
			Benzo(g,h,i)perylene	2024/10/29		88	%	50 - 130
B593974	BCZ	Spiked Blank	1-Methylnaphthalene	2024/10/29		92	%	50 - 130
			2-Methylnaphthalene	2024/10/29		99	%	50 - 130
			Benzo(j)fluoranthene	2024/10/29		93	%	50 - 130
			D10-ANTHRACENE (sur.)	2024/10/29		96	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2024/10/29		95	%	50 - 130
			Perylene	2024/10/29		82	%	50 - 130
			TERPHENYL-D14 (sur.)	2024/10/29		99	%	50 - 130
			Naphthalene	2024/10/29		92	%	50 - 130
			Acenaphthylene	2024/10/29		89	%	50 - 130
			Acenaphthene	2024/10/29		93	%	50 - 130
			Fluorene	2024/10/29		93	%	50 - 130
			Phenanthrene	2024/10/29		100	%	50 - 130
			Anthracene	2024/10/29		87	%	50 - 130
			Fluoranthene	2024/10/29		90	%	50 - 130
			Pyrene	2024/10/29		87	%	50 - 130
			Benzo(a)anthracene	2024/10/29		83	%	50 - 130
			Chrysene	2024/10/29		96	%	50 - 130
			Benzo(b)fluoranthene	2024/10/29		92	%	50 - 130
			Benzo(k)fluoranthene	2024/10/29		89	%	50 - 130
			Benzo(a)pyrene	2024/10/29		91	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2024/10/29		86	%	50 - 130
			Dibenz(a,h)anthracene	2024/10/29		89	%	50 - 130
			Benzo(g,h,i)perylene	2024/10/29		91	%	50 - 130
B593974	BCZ	Method Blank	1-Methylnaphthalene	2024/10/29	<0.050		mg/kg	
			2-Methylnaphthalene	2024/10/29	<0.050		mg/kg	
			Benzo(j)fluoranthene	2024/10/29	<0.050		mg/kg	
			D10-ANTHRACENE (sur.)	2024/10/29		95	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2024/10/29		94	%	50 - 130
			Perylene	2024/10/29	<0.050		mg/kg	



BUREAU  
VERITAS

Bureau Veritas Job #: C476093

Report Date: 2024/11/12

WSP Canada Inc.

Client Project #: CA0026317.6821.86000.04

Site Location: BAFFINLAND IRON MINE

Sampler Initials: DV

### QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B593974	BCZ	RPD [CWI483-02]	TERPHENYL-D14 (sur.)	2024/10/29		97	%	50 - 130
			Naphthalene	2024/10/29	<0.050		mg/kg	
			Acenaphthylene	2024/10/29	<0.050		mg/kg	
			Acenaphthene	2024/10/29	<0.050		mg/kg	
			Fluorene	2024/10/29	<0.050		mg/kg	
			Phenanthrene	2024/10/29	<0.050		mg/kg	
			Anthracene	2024/10/29	<0.050		mg/kg	
			Fluoranthene	2024/10/29	<0.050		mg/kg	
			Pyrene	2024/10/29	<0.050		mg/kg	
			Benzo(a)anthracene	2024/10/29	<0.050		mg/kg	
			Chrysene	2024/10/29	<0.050		mg/kg	
			Benzo(b)fluoranthene	2024/10/29	<0.050		mg/kg	
			Benzo(k)fluoranthene	2024/10/29	<0.050		mg/kg	
			Benzo(a)pyrene	2024/10/29	<0.050		mg/kg	
			Indeno(1,2,3-cd)pyrene	2024/10/29	<0.050		mg/kg	
			Dibenz(a,h)anthracene	2024/10/29	<0.050		mg/kg	
			Benzo(g,h,i)perylene	2024/10/29	<0.050		mg/kg	
			1-Methylnaphthalene	2024/10/29	NC		%	50
			2-Methylnaphthalene	2024/10/29	NC		%	50
			Benzo(j)fluoranthene	2024/10/29	NC		%	50
			Perylene	2024/10/29	NC		%	50
			Naphthalene	2024/10/29	NC		%	50
			Acenaphthylene	2024/10/29	NC		%	50
			Acenaphthene	2024/10/29	NC		%	50
			Fluorene	2024/10/29	NC		%	50
			Phenanthrene	2024/10/29	NC		%	50
			Anthracene	2024/10/29	NC		%	50
			Fluoranthene	2024/10/29	NC		%	50
			Pyrene	2024/10/29	NC		%	50
			Benzo(a)anthracene	2024/10/29	NC		%	50
			Chrysene	2024/10/29	NC		%	50
			Benzo(b)fluoranthene	2024/10/29	NC		%	50
			Benzo(k)fluoranthene	2024/10/29	NC		%	50
			Benzo(a)pyrene	2024/10/29	NC		%	50
			Indeno(1,2,3-cd)pyrene	2024/10/29	NC		%	50
			Dibenz(a,h)anthracene	2024/10/29	NC		%	50
			Benzo(g,h,i)perylene	2024/10/29	NC		%	50
B593975	éH7	Reagent Blank	1-Methylnaphthalene	2024/10/31	<0.050		mg/kg	
			2-Methylnaphthalene	2024/10/31	<0.050		mg/kg	
			Benzo(j)fluoranthene	2024/10/31	<0.050		mg/kg	
			D10-ANTHRACENE (sur.)	2024/10/31		101	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2024/10/31		96	%	50 - 130
			Perylene	2024/10/31	<0.050		mg/kg	
			TERPHENYL-D14 (sur.)	2024/10/31		101	%	50 - 130
			Naphthalene	2024/10/31	<0.050		mg/kg	
			Acenaphthylene	2024/10/31	<0.050		mg/kg	
			Acenaphthene	2024/10/31	<0.050		mg/kg	
			Fluorene	2024/10/31	<0.050		mg/kg	
			Phenanthrene	2024/10/31	<0.050		mg/kg	
			Anthracene	2024/10/31	<0.050		mg/kg	
			Fluoranthene	2024/10/31	<0.050		mg/kg	
			Pyrene	2024/10/31	<0.050		mg/kg	
			Benzo(a)anthracene	2024/10/31	<0.050		mg/kg	



BUREAU  
VERITAS

Bureau Veritas Job #: C476093

Report Date: 2024/11/12

WSP Canada Inc.

Client Project #: CA0026317.6821.86000.04

Site Location: BAFFINLAND IRON MINE

Sampler Initials: DV

### QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B593975	éH7	Matrix Spike [CWI484-02]	Chrysene	2024/10/31	<0.050		mg/kg	
			Benzo(b)fluoranthene	2024/10/31	<0.050		mg/kg	
			Benzo(k)fluoranthene	2024/10/31	<0.050		mg/kg	
			Benzo(a)pyrene	2024/10/31	<0.050		mg/kg	
			Indeno(1,2,3-cd)pyrene	2024/10/31	<0.050		mg/kg	
			Dibenz(a,h)anthracene	2024/10/31	<0.050		mg/kg	
			Benzo(g,h,i)perylene	2024/10/31	<0.050		mg/kg	
			1-Methylnaphthalene	2024/10/31		92	%	50 - 130
			2-Methylnaphthalene	2024/10/31		100	%	50 - 130
			Benzo(j)fluoranthene	2024/10/31		93	%	50 - 130
			D10-ANTHRACENE (sur.)	2024/10/31		87	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2024/10/31		87	%	50 - 130
			Perylene	2024/10/31		81	%	50 - 130
			TERPHENYL-D14 (sur.)	2024/10/31		97	%	50 - 130
			Naphthalene	2024/10/31		93	%	50 - 130
			Acenaphthylene	2024/10/31		84	%	50 - 130
			Acenaphthene	2024/10/31		95	%	50 - 130
			Fluorene	2024/10/31		94	%	50 - 130
			Phenanthrene	2024/10/31		97	%	50 - 130
			Anthracene	2024/10/31		86	%	50 - 130
			Fluoranthene	2024/10/31		85	%	50 - 130
			Pyrene	2024/10/31		85	%	50 - 130
			Benzo(a)anthracene	2024/10/31		79	%	50 - 130
			Chrysene	2024/10/31		99	%	50 - 130
			Benzo(b)fluoranthene	2024/10/31		90	%	50 - 130
			Benzo(k)fluoranthene	2024/10/31		93	%	50 - 130
			Benzo(a)pyrene	2024/10/31		88	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2024/10/31		85	%	50 - 130
			Dibenz(a,h)anthracene	2024/10/31		90	%	50 - 130
			Benzo(g,h,i)perylene	2024/10/31		90	%	50 - 130
B593975	éH7	Spiked Blank	1-Methylnaphthalene	2024/10/31		93	%	50 - 130
			2-Methylnaphthalene	2024/10/31		101	%	50 - 130
			Benzo(j)fluoranthene	2024/10/31		96	%	50 - 130
			D10-ANTHRACENE (sur.)	2024/10/31		98	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2024/10/31		95	%	50 - 130
			Perylene	2024/10/31		84	%	50 - 130
			TERPHENYL-D14 (sur.)	2024/10/31		101	%	50 - 130
			Naphthalene	2024/10/31		91	%	50 - 130
			Acenaphthylene	2024/10/31		92	%	50 - 130
			Acenaphthene	2024/10/31		96	%	50 - 130
			Fluorene	2024/10/31		96	%	50 - 130
			Phenanthrene	2024/10/31		104	%	50 - 130
			Anthracene	2024/10/31		87	%	50 - 130
			Fluoranthene	2024/10/31		92	%	50 - 130
			Pyrene	2024/10/31		92	%	50 - 130
			Benzo(a)anthracene	2024/10/31		84	%	50 - 130
			Chrysene	2024/10/31		100	%	50 - 130
			Benzo(b)fluoranthene	2024/10/31		96	%	50 - 130
			Benzo(k)fluoranthene	2024/10/31		92	%	50 - 130
			Benzo(a)pyrene	2024/10/31		94	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2024/10/31		86	%	50 - 130
			Dibenz(a,h)anthracene	2024/10/31		89	%	50 - 130
			Benzo(g,h,i)perylene	2024/10/31		91	%	50 - 130



BUREAU  
VERITAS

Bureau Veritas Job #: C476093

Report Date: 2024/11/12

WSP Canada Inc.

Client Project #: CA0026317.6821.86000.04

Site Location: BAFFINLAND IRON MINE

Sampler Initials: DV

### QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B593975	éH7	Method Blank	1-Methylnaphthalene	2024/10/31	<0.050		mg/kg	
			2-Methylnaphthalene	2024/10/31	<0.050		mg/kg	
			Benzo(j)fluoranthene	2024/10/31	<0.050		mg/kg	
			D10-ANTHRACENE (sur.)	2024/10/31		98	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2024/10/31		95	%	50 - 130
			Perylene	2024/10/31	<0.050		mg/kg	
			TERPHENYL-D14 (sur.)	2024/10/31		99	%	50 - 130
			Naphthalene	2024/10/31	<0.050		mg/kg	
			Acenaphthylene	2024/10/31	<0.050		mg/kg	
			Acenaphthene	2024/10/31	<0.050		mg/kg	
			Fluorene	2024/10/31	<0.050		mg/kg	
			Phenanthrene	2024/10/31	<0.050		mg/kg	
			Anthracene	2024/10/31	<0.050		mg/kg	
			Fluoranthene	2024/10/31	<0.050		mg/kg	
			Pyrene	2024/10/31	<0.050		mg/kg	
			Benzo(a)anthracene	2024/10/31	<0.050		mg/kg	
			Chrysene	2024/10/31	<0.050		mg/kg	
			Benzo(b)fluoranthene	2024/10/31	<0.050		mg/kg	
			Benzo(k)fluoranthene	2024/10/31	<0.050		mg/kg	
			Benzo(a)pyrene	2024/10/31	<0.050		mg/kg	
			Indeno(1,2,3-cd)pyrene	2024/10/31	<0.050		mg/kg	
			Dibenz(a,h)anthracene	2024/10/31	<0.050		mg/kg	
			Benzo(g,h,i)perylene	2024/10/31	<0.050		mg/kg	
B593975	éH7	RPD [CWI482-02]	1-Methylnaphthalene	2024/10/31	NC		%	50
			2-Methylnaphthalene	2024/10/31	NC		%	50
			Benzo(j)fluoranthene	2024/10/31	NC		%	50
			Perylene	2024/10/31	NC		%	50
			Naphthalene	2024/10/31	NC		%	50
			Acenaphthylene	2024/10/31	NC		%	50
			Acenaphthene	2024/10/31	NC		%	50
			Fluorene	2024/10/31	NC		%	50
			Phenanthrene	2024/10/31	NC		%	50
			Anthracene	2024/10/31	NC		%	50
			Fluoranthene	2024/10/31	NC		%	50
			Pyrene	2024/10/31	NC		%	50
			Benzo(a)anthracene	2024/10/31	NC		%	50
			Chrysene	2024/10/31	NC		%	50
			Benzo(b)fluoranthene	2024/10/31	NC		%	50
			Benzo(k)fluoranthene	2024/10/31	NC		%	50
			Benzo(a)pyrene	2024/10/31	NC		%	50
			Indeno(1,2,3-cd)pyrene	2024/10/31	NC		%	50
			Dibenz(a,h)anthracene	2024/10/31	NC		%	50



Bureau Veritas Job #: C476093  
Report Date: 2024/11/12

WSP Canada Inc.  
Client Project #: CA0026317.6821.86000.04  
Site Location: BAFFINLAND IRON MINE  
Sampler Initials: DV

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC		QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
Batch	Init							
			Benzo(g,h,i)perylene	2024/10/31	NC		%	50
<p>N/A = Not Applicable</p> <p>Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.</p> <p>Reagent Blank: A blank matrix containing all reagents used in the analytical procedure. Used to determine any analytical contamination.</p> <p>Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.</p> <p>QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.</p> <p>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.</p> <p>Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.</p> <p>Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.</p> <p>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 &lt;= 2x RDL).</p> <p>(1) Reference Material exceeds acceptance criteria. Re-analysis yields similar results.</p>								



BUREAU  
VERITAS

Bureau Veritas Job #: C476093

Report Date: 2024/11/12

WSP Canada Inc.

Client Project #: CA0026317.6821.86000.04

Site Location: BAFFINLAND IRON MINE

Sampler Initials: DV

## VALIDATION SIGNATURE PAGE

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

David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

Phil Deveau, Scientific Specialist (Organics)

Bureau Veritas Certified by David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

---

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 Raphael Kwan, General Manager, BC and Yukon Regions responsible for British Columbia Environmental laboratory operations.

2024/09/25 08:36



Burnaby: 4506 Canada Way, Burnaby, BC V5G 1K5 Toll Free (800) 665 8566  
Victoria: 460 Tennyson Place, Unit 1, Victoria, BC V8Z 6S8 Toll Free (866) 385-6112  
bvjabs.com



08542425

### CHAIN OF CUSTODY RECORD

Page 1 of 3

[illegible]

ICE FROZEN.



C476093  
2024/09/25 08:36



Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5 Toll Free (800) 665 8566  
Victoria: 460 Tennyson Place, Unit 1, Victoria, BC V8Z 5S8 Toll Free (866) 385-6112  
bvlabs.com



### CHAIN OF CUSTODY RECORD

Page 2 of 3

[illegible]

ICE FROZEN.



2024/09/25 08:36



Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5 Toll Free (800) 665 8566  
Victoria: 460 Tennyson Place, Unit 1, Victoria, BC V8Z 5S8 Toll Free (866) 385-6112  
bvlabs.com



### CHAIN OF CUSTODY RECORD

Page 3 of 3

[illegible]

ICE FROZEN.



Your Project #: CA0026317.6821-86000.04  
Site Location: BAFFINLAND IRON MINE, MILNE  
PORT/REFERENCE SITE  
Your C.O.C. #: 08546136, 08546137

**Attention: Collin Arens**

WSP Canada Inc.  
16820-107 AVE  
EDMONTON, AB  
CANADA T5P 4C3

**Report Date: 2025/02/03**  
Report #: R3618704  
Version: 2 - Revision

**CERTIFICATE OF ANALYSIS – REVISED REPORT**

**BUREAU VERITAS JOB #: C4A2459**

**Received: 2024/12/16, 12:13**

Sample Matrix: Tissue  
# Samples Received: 14

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Mercury in Tissue by CVAf - Wet Wt	14	N/A	2025/01/24	BBY7SOP-00012	EPA 245.7 R2m
Elements by ICPMS - Tissue Plug Wet Wt	14	2024/12/20	2025/01/22	BBY7SOP-00021 / BBY7SOP-00002	EPA 6020b R2 m
Moisture in Tissue - Freeze Drying	1	2024/12/20	2025/01/21	BBY7SOP-00021	BCMOE BCLM Aug 2014
Moisture in Tissue - Freeze Drying	13	2024/12/20	2024/12/20	BBY7SOP-00021	BCMOE BCLM Aug 2014

**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.

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.



Your Project #: CA0026317.6821-86000.04  
Site Location: BAFFINLAND IRON MINE, MILNE  
PORT/REFERENCE SITE  
Your C.O.C. #: 08546136, 08546137

**Attention: Collin Arens**

WSP Canada Inc.  
16820-107 AVE  
EDMONTON, AB  
CANADA T5P 4C3

**Report Date: 2025/02/03**  
Report #: R3618704  
Version: 2 - Revision

**CERTIFICATE OF ANALYSIS – REVISED REPORT**

**BUREAU VERITAS JOB #: C4A2459**

**Received: 2024/12/16, 12:13**

**Encryption Key**

Please direct all questions regarding this Certificate of Analysis to:

Melissa McIntosh, Customer Solutions Representative

Email: melissa.mcintosh@bureauveritas.com

Phone# (604) 734 7276

=====

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 Raphael Kwan, General Manager, BC and Yukon Regions responsible for British Columbia Environmental laboratory operations.



BUREAU  
VERITAS

Bureau Veritas Job #: C4A2459

Report Date: 2025/02/03

WSP Canada Inc.

Client Project #: CA0026317.6821-86000.04

Site Location: BAFFINLAND IRON MINE, MILNE  
PORT/REFERENCE SITE

Sampler Initials: DV

### ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Bureau Veritas ID		DCF503	DCF504	DCF505		
Sampling Date		2024/12/16	2024/12/16	2024/12/16		
COC Number		08546136	08546136	08546136		
	UNITS	BAFF24-MLN-HTAR- COMP-METAL-1	BAFF24-MLN-HTAR- COMP-METAL-2	BAFF24-MLN-HTAR- COMP-METAL-3	RDL	QC Batch
<b>Mercury by CVAE</b>						
Total (Wet Wt) Mercury (Hg)	mg/kg	0.0302	0.0368	0.0460	0.0020	B660368
<b>Total Metals by ICPMS</b>						
Total (Wet Wt) Aluminum (Al)	mg/kg	63.5	64.9	123	0.50	B645263
Total (Wet Wt) Antimony (Sb)	mg/kg	0.0045	0.0129	0.0036	0.0020	B645263
Total (Wet Wt) Arsenic (As)	mg/kg	1.72	1.75	2.16	0.0050	B645263
Total (Wet Wt) Barium (Ba)	mg/kg	3.71	20.3	4.35	0.010	B645263
Total (Wet Wt) Beryllium (Be)	mg/kg	0.0045	0.0035	0.0077	0.0020	B645263
Total (Wet Wt) Bismuth (Bi)	mg/kg	0.0078	0.0023	0.0027	0.0013	B645263
Total (Wet Wt) Boron (B)	mg/kg	2.36	3.03	3.08	0.20	B645263
Total (Wet Wt) Cadmium (Cd)	mg/kg	0.816	0.931	1.04	0.0013	B645263
Total (Wet Wt) Calcium (Ca)	mg/kg	1220	1130	1430	4.0	B645263
Total (Wet Wt) Chromium (Cr)	mg/kg	0.189	0.251	0.389	0.025	B645263
Total (Wet Wt) Cobalt (Co)	mg/kg	0.244	0.331	0.295	0.0013	B645263
Total (Wet Wt) Copper (Cu)	mg/kg	1.65	1.70	1.60	0.013	B645263
Total (Wet Wt) Iron (Fe)	mg/kg	151	146	256	0.25	B645263
Total (Wet Wt) Lead (Pb)	mg/kg	0.0953	0.0908	0.132	0.0013	B645263
Total (Wet Wt) Magnesium (Mg)	mg/kg	825	1000	1040	0.40	B645263
Total (Wet Wt) Manganese (Mn)	mg/kg	21.9	30.9	18.0	0.010	B645263
Total (Wet Wt) Molybdenum (Mo)	mg/kg	0.190	0.191	0.168	0.0080	B645263
Total (Wet Wt) Nickel (Ni)	mg/kg	0.426	0.662	0.634	0.010	B645263
Total (Wet Wt) Phosphorus (P)	mg/kg	1480	1250	1150	2.0	B645263
Total (Wet Wt) Potassium (K)	mg/kg	959	1090	834	2.5	B645263
Total (Wet Wt) Selenium (Se)	mg/kg	1.66	1.66	1.58	0.010	B645263
Total (Wet Wt) Silver (Ag)	mg/kg	0.0087	0.0072	0.0065	0.0013	B645263
Total (Wet Wt) Sodium (Na)	mg/kg	2800	5000	3980	2.5	B645263
Total (Wet Wt) Strontium (Sr)	mg/kg	9.48	11.2	12.3	0.013	B645263
Total (Wet Wt) Thallium (Tl)	mg/kg	0.00289	0.00481	0.00393	0.00040	B645263
Total (Wet Wt) Tin (Sn)	mg/kg	<0.020	<0.020	<0.020	0.020	B645263
Total (Wet Wt) Titanium (Ti)	mg/kg	2.25	1.94	3.66	0.13	B645263
Total (Wet Wt) Uranium (U)	mg/kg	0.0555	0.0910	0.0870	0.00040	B645263
Total (Wet Wt) Vanadium (V)	mg/kg	0.697	0.717	0.820	0.020	B645263
Total (Wet Wt) Zinc (Zn)	mg/kg	17.2	16.7	16.1	0.20	B645263
RDL = Reportable Detection Limit						



BUREAU  
VERITAS

Bureau Veritas Job #: C4A2459  
Report Date: 2025/02/03

WSP Canada Inc.  
Client Project #: CA0026317.6821-86000.04  
Site Location: BAFFINLAND IRON MINE, MILNE  
PORT/REFERENCE SITE  
Sampler Initials: DV

### ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Bureau Veritas ID		DCF506	DCF507	DCF508		
Sampling Date		2024/12/16	2024/12/16	2024/12/16		
COC Number		08546136	08546136	08546136		
	UNITS	BAFF24-MLN-HTAR- COMP-METAL-4	BAFF24-MLN-HTAR- COMP-METAL-5	BAFF24-MLN-HTAR- COMP-METAL-6	RDL	QC Batch
<b>Mercury by CVAE</b>						
Total (Wet Wt) Mercury (Hg)	mg/kg	0.0296	0.0493	0.0487	0.0020	B660368
<b>Total Metals by ICPMS</b>						
Total (Wet Wt) Aluminum (Al)	mg/kg	67.6	21.1	29.3	0.50	B645263
Total (Wet Wt) Antimony (Sb)	mg/kg	0.0064	0.0051	0.0038	0.0020	B645263
Total (Wet Wt) Arsenic (As)	mg/kg	1.97	1.75	1.52	0.0050	B645263
Total (Wet Wt) Barium (Ba)	mg/kg	3.90	53.1	4.63	0.010	B645263
Total (Wet Wt) Beryllium (Be)	mg/kg	0.0044	0.0020	0.0023	0.0020	B645263
Total (Wet Wt) Bismuth (Bi)	mg/kg	0.0028	0.0023	0.0016	0.0013	B645263
Total (Wet Wt) Boron (B)	mg/kg	2.88	2.09	2.43	0.20	B645263
Total (Wet Wt) Cadmium (Cd)	mg/kg	0.804	0.801	1.28	0.0013	B645263
Total (Wet Wt) Calcium (Ca)	mg/kg	1340	684	877	4.0	B645263
Total (Wet Wt) Chromium (Cr)	mg/kg	0.251	0.187	0.153	0.025	B645263
Total (Wet Wt) Cobalt (Co)	mg/kg	0.257	0.255	0.264	0.0013	B645263
Total (Wet Wt) Copper (Cu)	mg/kg	1.49	1.58	1.25	0.013	B645263
Total (Wet Wt) Iron (Fe)	mg/kg	164	82.5	79.8	0.25	B645263
Total (Wet Wt) Lead (Pb)	mg/kg	0.0932	0.0510	0.0503	0.0013	B645263
Total (Wet Wt) Magnesium (Mg)	mg/kg	647	841	911	0.40	B645263
Total (Wet Wt) Manganese (Mn)	mg/kg	17.8	20.5	27.3	0.010	B645263
Total (Wet Wt) Molybdenum (Mo)	mg/kg	0.122	0.173	0.157	0.0080	B645263
Total (Wet Wt) Nickel (Ni)	mg/kg	0.447	0.597	0.565	0.010	B645263
Total (Wet Wt) Phosphorus (P)	mg/kg	2030	1330	1310	2.0	B645263
Total (Wet Wt) Potassium (K)	mg/kg	1070	993	1190	2.5	B645263
Total (Wet Wt) Selenium (Se)	mg/kg	1.55	1.32	1.71	0.010	B645263
Total (Wet Wt) Silver (Ag)	mg/kg	0.0046	0.0107	0.0051	0.0013	B645263
Total (Wet Wt) Sodium (Na)	mg/kg	2190	4300	5190	2.5	B645263
Total (Wet Wt) Strontium (Sr)	mg/kg	9.64	9.99	8.17	0.013	B645263
Total (Wet Wt) Thallium (Tl)	mg/kg	0.00404	0.00213	0.00213	0.00040	B645263
Total (Wet Wt) Tin (Sn)	mg/kg	<0.020	<0.020	<0.020	0.020	B645263
Total (Wet Wt) Titanium (Ti)	mg/kg	2.24	0.66	0.83	0.13	B645263
Total (Wet Wt) Uranium (U)	mg/kg	0.0712	0.0757	0.0570	0.00040	B645263
Total (Wet Wt) Vanadium (V)	mg/kg	0.910	0.516	0.446	0.020	B645263
Total (Wet Wt) Zinc (Zn)	mg/kg	13.1	13.1	17.4	0.20	B645263
RDL = Reportable Detection Limit						



BUREAU  
VERITAS

Bureau Veritas Job #: C4A2459

Report Date: 2025/02/03

WSP Canada Inc.

Client Project #: CA0026317.6821-86000.04

Site Location: BAFFINLAND IRON MINE, MILNE  
PORT/REFERENCE SITE

Sampler Initials: DV

### ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Bureau Veritas ID		DCF509	DCF510	DCF511		
Sampling Date		2024/12/16	2024/12/16	2024/12/16		
COC Number		08546136	08546136	08546136		
	UNITS	BAFF24-MLN-HTAR- COMP-METAL-7	BAFF24-MLN-HTAR- COMP-METAL-8	BAFF24-REF-HTAR- COMP-METAL-1	RDL	QC Batch
<b>Mercury by CVAE</b>						
Total (Wet Wt) Mercury (Hg)	mg/kg	0.0504	0.0397	0.0203	0.0020	B660368
<b>Total Metals by ICPMS</b>						
Total (Wet Wt) Aluminum (Al)	mg/kg	47.7	25.3	112	0.50	B645263
Total (Wet Wt) Antimony (Sb)	mg/kg	0.0234	0.0027	0.0046	0.0020	B645263
Total (Wet Wt) Arsenic (As)	mg/kg	2.18	2.05	1.78	0.0050	B645263
Total (Wet Wt) Barium (Ba)	mg/kg	31.8	5.29	15.9	0.010	B645263
Total (Wet Wt) Beryllium (Be)	mg/kg	0.0067	0.0021	0.0058	0.0020	B645263
Total (Wet Wt) Bismuth (Bi)	mg/kg	0.0027	0.0018	0.0024	0.0013	B645263
Total (Wet Wt) Boron (B)	mg/kg	2.81	2.78	2.98	0.20	B645263
Total (Wet Wt) Cadmium (Cd)	mg/kg	0.817	0.902	1.11	0.0013	B645263
Total (Wet Wt) Calcium (Ca)	mg/kg	988	939	1140	4.0	B645263
Total (Wet Wt) Chromium (Cr)	mg/kg	0.375	0.167	0.233	0.025	B645263
Total (Wet Wt) Cobalt (Co)	mg/kg	0.302	0.199	0.240	0.0013	B645263
Total (Wet Wt) Copper (Cu)	mg/kg	1.44	1.16	1.67	0.013	B645263
Total (Wet Wt) Iron (Fe)	mg/kg	132	85.7	177	0.25	B645263
Total (Wet Wt) Lead (Pb)	mg/kg	0.0772	0.0435	0.224	0.0013	B645263
Total (Wet Wt) Magnesium (Mg)	mg/kg	1050	851	980	0.40	B645263
Total (Wet Wt) Manganese (Mn)	mg/kg	18.6	14.3	15.7	0.010	B645263
Total (Wet Wt) Molybdenum (Mo)	mg/kg	0.171	0.153	0.348	0.0080	B645263
Total (Wet Wt) Nickel (Ni)	mg/kg	0.727	0.505	0.414	0.010	B645263
Total (Wet Wt) Phosphorus (P)	mg/kg	952	1210	1530	2.0	B645263
Total (Wet Wt) Potassium (K)	mg/kg	882	1080	1450	2.5	B645263
Total (Wet Wt) Selenium (Se)	mg/kg	1.55	1.83	1.75	0.010	B645263
Total (Wet Wt) Silver (Ag)	mg/kg	0.0067	0.0030	0.0435	0.0013	B645263
Total (Wet Wt) Sodium (Na)	mg/kg	5620	4940	4770	2.5	B645263
Total (Wet Wt) Strontium (Sr)	mg/kg	12.6	9.96	10.1	0.013	B645263
Total (Wet Wt) Thallium (Tl)	mg/kg	0.00448	0.00205	0.00349	0.00040	B645263
Total (Wet Wt) Tin (Sn)	mg/kg	<0.020	<0.020	<0.020	0.020	B645263
Total (Wet Wt) Titanium (Ti)	mg/kg	1.35	0.98	3.98	0.13	B645263
Total (Wet Wt) Uranium (U)	mg/kg	0.114	0.0659	0.0608	0.00040	B645263
Total (Wet Wt) Vanadium (V)	mg/kg	0.767	0.510	0.602	0.020	B645263
Total (Wet Wt) Zinc (Zn)	mg/kg	16.8	13.8	14.0	0.20	B645263
RDL = Reportable Detection Limit						



BUREAU  
VERITAS

Bureau Veritas Job #: C4A2459

Report Date: 2025/02/03

WSP Canada Inc.

Client Project #: CA0026317.6821-86000.04

Site Location: BAFFINLAND IRON MINE, MILNE  
PORT/REFERENCE SITE

Sampler Initials: DV

### ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Bureau Veritas ID		DCF511		DCF512		
Sampling Date		2024/12/16		2024/12/16		
COC Number		08546136		08546136		
	UNITS	BAFF24-REF-HTAR- COMP-METAL-1 REPEAT	QC Batch	BAFF24-REF-HTAR- COMP-METAL-2	RDL	QC Batch
<b>Mercury by CVAF</b>						
Total (Wet Wt) Mercury (Hg)	mg/kg	N/A	B660368	0.0432	0.0020	B660368
<b>Total Metals by ICPMS</b>						
Total (Wet Wt) Aluminum (Al)	mg/kg	N/A	B645263	304	0.50	B645263
Total (Wet Wt) Antimony (Sb)	mg/kg	N/A	B645263	0.0140	0.0020	B645263
Total (Wet Wt) Arsenic (As)	mg/kg	N/A	B645263	2.57	0.0050	B645263
Total (Wet Wt) Barium (Ba)	mg/kg	N/A	B645263	38.3	0.010	B645263
Total (Wet Wt) Beryllium (Be)	mg/kg	N/A	B645263	0.0196	0.0020	B645263
Total (Wet Wt) Bismuth (Bi)	mg/kg	N/A	B645263	0.0049	0.0013	B645263
Total (Wet Wt) Boron (B)	mg/kg	N/A	B645263	4.43	0.20	B645263
Total (Wet Wt) Cadmium (Cd)	mg/kg	N/A	B645263	1.30	0.0013	B645263
Total (Wet Wt) Calcium (Ca)	mg/kg	N/A	B645263	2260	4.0	B645263
Total (Wet Wt) Chromium (Cr)	mg/kg	N/A	B645263	0.719	0.025	B645263
Total (Wet Wt) Cobalt (Co)	mg/kg	N/A	B645263	0.485	0.0013	B645263
Total (Wet Wt) Copper (Cu)	mg/kg	N/A	B645263	2.09	0.013	B645263
Total (Wet Wt) Iron (Fe)	mg/kg	N/A	B645263	528	0.25	B645263
Total (Wet Wt) Lead (Pb)	mg/kg	N/A	B645263	0.352	0.0013	B645263
Total (Wet Wt) Magnesium (Mg)	mg/kg	N/A	B645263	1310	0.40	B645263
Total (Wet Wt) Manganese (Mn)	mg/kg	N/A	B645263	42.1	0.010	B645263
Total (Wet Wt) Molybdenum (Mo)	mg/kg	0.242	B673983	0.196	0.0080	B645263
Total (Wet Wt) Nickel (Ni)	mg/kg	N/A	N/A	0.846	0.010	B645263
Total (Wet Wt) Phosphorus (P)	mg/kg	N/A	N/A	1340	2.0	B645263
Total (Wet Wt) Potassium (K)	mg/kg	N/A	N/A	1230	2.5	B645263
Total (Wet Wt) Selenium (Se)	mg/kg	N/A	N/A	1.97	0.010	B645263
Total (Wet Wt) Silver (Ag)	mg/kg	0.0247	B673983	0.0097	0.0013	B645263
Total (Wet Wt) Sodium (Na)	mg/kg	N/A	N/A	4750	2.5	B645263
Total (Wet Wt) Strontium (Sr)	mg/kg	N/A	N/A	16.7	0.013	B645263
Total (Wet Wt) Thallium (Tl)	mg/kg	N/A	N/A	0.00829	0.00040	B645263
Total (Wet Wt) Tin (Sn)	mg/kg	N/A	N/A	<0.020	0.020	B645263
Total (Wet Wt) Titanium (Ti)	mg/kg	N/A	N/A	13.3	0.13	B645263
Total (Wet Wt) Uranium (U)	mg/kg	N/A	N/A	0.161	0.00040	B645263
Total (Wet Wt) Vanadium (V)	mg/kg	N/A	N/A	1.18	0.020	B645263
RDL = Reportable Detection Limit						
N/A = Not Applicable						





Bureau Veritas Job #: C4A2459  
Report Date: 2025/02/03

WSP Canada Inc.  
Client Project #: CA0026317.6821-86000.04  
Site Location: BAFFINLAND IRON MINE, MILNE  
PORT/REFERENCE SITE  
Sampler Initials: DV

ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Bureau Veritas ID		DCF511		DCF512		
Sampling Date		2024/12/16		2024/12/16		
COC Number		08546136		08546136		
	UNITS	BAFF24-REF-HTAR- COMP-METAL-1 REPEAT	QC Batch	BAFF24-REF-HTAR- COMP-METAL-2	RDL	QC Batch
Total (Wet Wt) Zinc (Zn)	mg/kg	N/A	N/A	19.9	0.20	B645263
RDL = Reportable Detection Limit						
N/A = Not Applicable						





**BUREAU  
VERITAS**

Bureau Veritas Job #: C4A2459  
Report Date: 2025/02/03

WSP Canada Inc.  
Client Project #: CA0026317.6821-86000.04  
Site Location: BAFFINLAND IRON MINE, MILNE  
PORT/REFERENCE SITE  
Sampler Initials: DV

### ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Bureau Veritas ID		DCF512		DCF513	DCF514		
Sampling Date		2024/12/16		2024/12/16	2024/12/16		
COC Number		08546136		08546136	08546136		
	UNITS	BAFF24-REF-HTAR- COMP-METAL-2 REPEAT	QC Batch	BAFF24-REF-HTAR- COMP-METAL-3	BAFF24-REF-HTAR- COMP-METAL-4	RDL	QC Batch

<b>Mercury by CVAF</b>							
Total (Wet Wt) Mercury (Hg)	mg/kg	N/A	B660368	0.0271	0.0484	0.0020	B660368
<b>Total Metals by ICPMS</b>							
Total (Wet Wt) Aluminum (Al)	mg/kg	253	B673983	140	133	0.50	B645263
Total (Wet Wt) Antimony (Sb)	mg/kg	N/A	N/A	0.0042	0.0050	0.0020	B645263
Total (Wet Wt) Arsenic (As)	mg/kg	N/A	N/A	2.25	2.21	0.0050	B645263
Total (Wet Wt) Barium (Ba)	mg/kg	N/A	N/A	2.93	56.4	0.010	B645263
Total (Wet Wt) Beryllium (Be)	mg/kg	N/A	N/A	0.0068	0.0114	0.0020	B645263
Total (Wet Wt) Bismuth (Bi)	mg/kg	N/A	N/A	0.0036	0.0043	0.0013	B645263
Total (Wet Wt) Boron (B)	mg/kg	N/A	N/A	5.20	3.57	0.20	B645263
Total (Wet Wt) Cadmium (Cd)	mg/kg	N/A	N/A	0.857	1.12	0.0013	B645263
Total (Wet Wt) Calcium (Ca)	mg/kg	1880	B673983	1510	1270	4.0	B645263
Total (Wet Wt) Chromium (Cr)	mg/kg	0.679	B673983	0.288	0.436	0.025	B645263
Total (Wet Wt) Cobalt (Co)	mg/kg	N/A	N/A	0.250	0.358	0.0013	B645263
Total (Wet Wt) Copper (Cu)	mg/kg	N/A	N/A	2.03	1.66	0.013	B645263
Total (Wet Wt) Iron (Fe)	mg/kg	445	B673983	216	253	0.25	B645263
Total (Wet Wt) Lead (Pb)	mg/kg	N/A	N/A	0.209	0.190	0.0013	B645263
Total (Wet Wt) Magnesium (Mg)	mg/kg	N/A	N/A	852	1180	0.40	B645263
Total (Wet Wt) Manganese (Mn)	mg/kg	31.2	B673983	20.3	19.0	0.010	B645263
Total (Wet Wt) Molybdenum (Mo)	mg/kg	N/A	N/A	0.143	0.184	0.0080	B645263
Total (Wet Wt) Nickel (Ni)	mg/kg	N/A	N/A	0.453	0.805	0.010	B645263
Total (Wet Wt) Phosphorus (P)	mg/kg	N/A	N/A	1500	1550	2.0	B645263
Total (Wet Wt) Potassium (K)	mg/kg	N/A	N/A	1500	1160	2.5	B645263
Total (Wet Wt) Selenium (Se)	mg/kg	N/A	N/A	2.18	1.96	0.010	B645263
Total (Wet Wt) Silver (Ag)	mg/kg	N/A	N/A	0.0105	0.0094	0.0013	B645263
Total (Wet Wt) Sodium (Na)	mg/kg	N/A	N/A	4590	4890	2.5	B645263
Total (Wet Wt) Strontium (Sr)	mg/kg	N/A	N/A	12.3	12.2	0.013	B645263
Total (Wet Wt) Thallium (Tl)	mg/kg	0.00755	B673983	0.00412	0.00449	0.00040	B645263
Total (Wet Wt) Tin (Sn)	mg/kg	N/A	N/A	<0.020	<0.020	0.020	B645263
Total (Wet Wt) Titanium (Ti)	mg/kg	10.5	B673983	4.62	5.09	0.13	B645263
Total (Wet Wt) Uranium (U)	mg/kg	N/A	N/A	0.0706	0.125	0.00040	B645263
Total (Wet Wt) Vanadium (V)	mg/kg	N/A	N/A	0.755	0.874	0.020	B645263

RDL = Reportable Detection Limit  
N/A = Not Applicable



ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Bureau Veritas ID		DCF512		DCF513	DCF514		
Sampling Date		2024/12/16		2024/12/16	2024/12/16		
COC Number		08546136		08546136	08546136		
	UNITS	BAFF24-REF-HTAR- COMP-METAL-2 REPEAT	QC Batch	BAFF24-REF-HTAR- COMP-METAL-3	BAFF24-REF-HTAR- COMP-METAL-4	RDL	QC Batch
Total (Wet Wt) Zinc (Zn)	mg/kg	N/A	N/A	16.4	17.4	0.20	B645263
RDL = Reportable Detection Limit							
N/A = Not Applicable							



BUREAU  
VERITAS

Bureau Veritas Job #: C4A2459

Report Date: 2025/02/03

WSP Canada Inc.

Client Project #: CA0026317.6821-86000.04

Site Location: BAFFINLAND IRON MINE, MILNE  
PORT/REFERENCE SITE

Sampler Initials: DV

### ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

<b>Bureau Veritas ID</b>		DCF515		DCF516		
<b>Sampling Date</b>		2024/12/16		2024/12/16		
<b>COC Number</b>		08546137		08546137		
	<b>UNITS</b>	<b>BAFF24-REF-HTAR- COMP-METAL-5</b>	<b>RDL</b>	<b>BAFF24-REF-HTAR- COMP-METAL-6</b>	<b>RDL</b>	<b>QC Batch</b>
<b>Mercury by CVAF</b>						
Total (Wet Wt) Mercury (Hg)	mg/kg	0.0289	0.0020	0.0264	0.0010	B660368
<b>Total Metals by ICPMS</b>						
Total (Wet Wt) Aluminum (Al)	mg/kg	71.0	0.50	90.7	0.50	B645263
Total (Wet Wt) Antimony (Sb)	mg/kg	0.0038	0.0020	0.0056	0.0020	B645263
Total (Wet Wt) Arsenic (As)	mg/kg	1.83	0.0050	2.18	0.0050	B645263
Total (Wet Wt) Barium (Ba)	mg/kg	142	0.010	8.61	0.010	B645263
Total (Wet Wt) Beryllium (Be)	mg/kg	0.0058	0.0020	0.0065	0.0020	B645263
Total (Wet Wt) Bismuth (Bi)	mg/kg	0.0022	0.0013	0.0020	0.0013	B645263
Total (Wet Wt) Boron (B)	mg/kg	2.72	0.20	2.73	0.20	B645263
Total (Wet Wt) Cadmium (Cd)	mg/kg	0.732	0.0013	1.27	0.0013	B645263
Total (Wet Wt) Calcium (Ca)	mg/kg	863	4.0	892	4.0	B645263
Total (Wet Wt) Chromium (Cr)	mg/kg	0.319	0.025	0.362	0.025	B645263
Total (Wet Wt) Cobalt (Co)	mg/kg	0.309	0.0013	0.266	0.0013	B645263
Total (Wet Wt) Copper (Cu)	mg/kg	1.24	0.013	1.07	0.013	B645263
Total (Wet Wt) Iron (Fe)	mg/kg	141	0.25	159	0.25	B645263
Total (Wet Wt) Lead (Pb)	mg/kg	0.112	0.0013	0.119	0.0013	B645263
Total (Wet Wt) Magnesium (Mg)	mg/kg	883	0.40	1040	0.40	B645263
Total (Wet Wt) Manganese (Mn)	mg/kg	22.1	0.010	17.7	0.010	B645263
Total (Wet Wt) Molybdenum (Mo)	mg/kg	0.159	0.0080	0.112	0.0080	B645263
Total (Wet Wt) Nickel (Ni)	mg/kg	0.619	0.010	0.695	0.010	B645263
Total (Wet Wt) Phosphorus (P)	mg/kg	1210	2.0	1190	2.0	B645263
Total (Wet Wt) Potassium (K)	mg/kg	1170	2.5	1210	2.5	B645263
Total (Wet Wt) Selenium (Se)	mg/kg	1.51	0.010	1.02	0.010	B645263
Total (Wet Wt) Silver (Ag)	mg/kg	0.0136	0.0013	0.0110	0.0013	B645263
Total (Wet Wt) Sodium (Na)	mg/kg	4910	2.5	5620	2.5	B645263
Total (Wet Wt) Strontium (Sr)	mg/kg	14.1	0.013	8.13	0.013	B645263
Total (Wet Wt) Thallium (Tl)	mg/kg	0.00345	0.00040	0.00416	0.00040	B645263
Total (Wet Wt) Tin (Sn)	mg/kg	<0.020	0.020	<0.020	0.020	B645263
Total (Wet Wt) Titanium (Ti)	mg/kg	2.52	0.13	3.11	0.13	B645263
Total (Wet Wt) Uranium (U)	mg/kg	0.104	0.00040	0.119	0.00040	B645263
Total (Wet Wt) Vanadium (V)	mg/kg	0.562	0.020	0.829	0.020	B645263
Total (Wet Wt) Zinc (Zn)	mg/kg	11.4	0.20	10.3	0.20	B645263
RDL = Reportable Detection Limit						



BUREAU  
VERITAS

Bureau Veritas Job #: C4A2459  
Report Date: 2025/02/03

WSP Canada Inc.  
Client Project #: CA0026317.6821-86000.04  
Site Location: BAFFINLAND IRON MINE, MILNE  
PORT/REFERENCE SITE  
Sampler Initials: DV

PHYSICAL TESTING (TISSUE)

Bureau Veritas ID		DCF503	DCF504	DCF505	DCF506		
Sampling Date		2024/12/16	2024/12/16	2024/12/16	2024/12/16		
COC Number		08546136	08546136	08546136	08546136		
	UNITS	BAFF24-MLN-HTAR- COMP-METAL-1	BAFF24-MLN-HTAR- COMP-METAL-2	BAFF24-MLN-HTAR- COMP-METAL-3	BAFF24-MLN-HTAR- COMP-METAL-4	RDL	QC Batch

Physical Properties							
Sample Wet Weight	%	0.25	0.24	0.20	0.33	N/A	B645339
Moisture	%	79	82	81	79	0.30	B645339
RDL = Reportable Detection Limit N/A = Not Applicable							

Bureau Veritas ID		DCF507	DCF508	DCF509	DCF510		
Sampling Date		2024/12/16	2024/12/16	2024/12/16	2024/12/16		
COC Number		08546136	08546136	08546136	08546136		
	UNITS	BAFF24-MLN-HTAR- COMP-METAL-5	BAFF24-MLN-HTAR- COMP-METAL-6	BAFF24-MLN-HTAR- COMP-METAL-7	BAFF24-MLN-HTAR- COMP-METAL-8	RDL	QC Batch

Physical Properties							
Sample Wet Weight	%	0.31	0.26	0.20	0.38	N/A	B645339
Moisture	%	82	80	83	81	0.30	B645339
RDL = Reportable Detection Limit N/A = Not Applicable							

Bureau Veritas ID		DCF511	DCF512	DCF513	DCF514		
Sampling Date		2024/12/16	2024/12/16	2024/12/16	2024/12/16		
COC Number		08546136	08546136	08546136	08546136		
	UNITS	BAFF24-REF-HTAR- COMP-METAL-1	BAFF24-REF-HTAR- COMP-METAL-2	BAFF24-REF-HTAR- COMP-METAL-3	BAFF24-REF-HTAR- COMP-METAL-4	RDL	QC Batch

Physical Properties							
Sample Wet Weight	%	0.28	0.31	0.33	0.37	N/A	B645339
Moisture	%	78	76	75	78	0.30	B645339
RDL = Reportable Detection Limit N/A = Not Applicable							

Bureau Veritas ID		DCF515	DCF516		
Sampling Date		2024/12/16	2024/12/16		
COC Number		08546137	08546137		
	UNITS	BAFF24-REF-HTAR- COMP-METAL-5	BAFF24-REF-HTAR- COMP-METAL-6	RDL	QC Batch
Physical Properties					
Sample Wet Weight	%	0.32	0.21	N/A	B645339
Moisture	%	82	79	0.30	B645339
RDL = Reportable Detection Limit N/A = Not Applicable					



BUREAU  
VERITAS

Bureau Veritas Job #: C4A2459

Report Date: 2025/02/03

WSP Canada Inc.

Client Project #: CA0026317.6821-86000.04

Site Location: BAFFINLAND IRON MINE, MILNE  
PORT/REFERENCE SITE

Sampler Initials: DV

### GENERAL COMMENTS

Sample DCF511, Elements by ICPMS - Tissue Plug Wet Wt: Test repeated.

Sample DCF512, Elements by ICPMS - Tissue Plug Wet Wt: Test repeated.

**Results relate only to the items tested.**



**BUREAU  
VERITAS**

Bureau Veritas Job #: C4A2459  
Report Date: 2025/02/03

WSP Canada Inc.  
Client Project #: CA0026317.6821-86000.04  
Site Location: BAFFINLAND IRON MINE, MILNE  
PORT/REFERENCE SITE  
Sampler Initials: DV

### QUALITY ASSURANCE REPORT

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B645263	MYO	QC Standard		Total (Wet Wt) Antimony (Sb)	2025/01/22		218	%	N/A
				Total (Wet Wt) Arsenic (As)	2025/01/22		88	%	N/A
				Total (Wet Wt) Cadmium (Cd)	2025/01/22		88	%	N/A
				Total (Wet Wt) Calcium (Ca)	2025/01/22		93	%	N/A
				Total (Wet Wt) Cobalt (Co)	2025/01/22		87	%	N/A
				Total (Wet Wt) Copper (Cu)	2025/01/22		90	%	N/A
				Total (Wet Wt) Iron (Fe)	2025/01/22		93	%	N/A
				Total (Wet Wt) Lead (Pb)	2025/01/22		103	%	N/A
				Total (Wet Wt) Manganese (Mn)	2025/01/22		89	%	N/A
				Total (Wet Wt) Molybdenum (Mo)	2025/01/22		89	%	N/A
				Total (Wet Wt) Phosphorus (P)	2025/01/22		94	%	N/A
				Total (Wet Wt) Potassium (K)	2025/01/22		94	%	N/A
				Total (Wet Wt) Selenium (Se)	2025/01/22		94	%	N/A
				Total (Wet Wt) Silver (Ag)	2025/01/22		91	%	N/A
				Total (Wet Wt) Sodium (Na)	2025/01/22		97	%	N/A
				Total (Wet Wt) Strontium (Sr)	2025/01/22		92	%	N/A
				Total (Wet Wt) Thallium (Tl)	2025/01/22		88	%	N/A
				Total (Wet Wt) Tin (Sn)	2025/01/22		79	%	N/A
				Total (Wet Wt) Uranium (U)	2025/01/22		94	%	N/A
				Total (Wet Wt) Vanadium (V)	2025/01/22		95	%	N/A
B645263	MYO	Spiked Blank		Total (Wet Wt) Zinc (Zn)	2025/01/22		88	%	N/A
				Total (Wet Wt) Aluminum (Al)	2025/01/22		108	%	80 - 120
				Total (Wet Wt) Antimony (Sb)	2025/01/22		111	%	80 - 120
				Total (Wet Wt) Arsenic (As)	2025/01/22		112	%	80 - 120
				Total (Wet Wt) Barium (Ba)	2025/01/22		104	%	80 - 120
				Total (Wet Wt) Beryllium (Be)	2025/01/22		100	%	80 - 120
				Total (Wet Wt) Bismuth (Bi)	2025/01/22		103	%	80 - 120
				Total (Wet Wt) Boron (B)	2025/01/22		111	%	80 - 120
				Total (Wet Wt) Cadmium (Cd)	2025/01/22		106	%	80 - 120
				Total (Wet Wt) Calcium (Ca)	2025/01/22		103	%	80 - 120
				Total (Wet Wt) Chromium (Cr)	2025/01/22		105	%	80 - 120
				Total (Wet Wt) Cobalt (Co)	2025/01/22		107	%	80 - 120
				Total (Wet Wt) Copper (Cu)	2025/01/22		106	%	80 - 120
				Total (Wet Wt) Iron (Fe)	2025/01/22		112	%	80 - 120
				Total (Wet Wt) Lead (Pb)	2025/01/22		104	%	80 - 120
				Total (Wet Wt) Magnesium (Mg)	2025/01/22		103	%	80 - 120
				Total (Wet Wt) Manganese (Mn)	2025/01/22		107	%	80 - 120
				Total (Wet Wt) Molybdenum (Mo)	2025/01/22		107	%	80 - 120
				Total (Wet Wt) Nickel (Ni)	2025/01/22		107	%	80 - 120
				Total (Wet Wt) Phosphorus (P)	2025/01/22		106	%	80 - 120
				Total (Wet Wt) Potassium (K)	2025/01/22		102	%	80 - 120
				Total (Wet Wt) Selenium (Se)	2025/01/22		114	%	80 - 120
				Total (Wet Wt) Silver (Ag)	2025/01/22		107	%	80 - 120
				Total (Wet Wt) Sodium (Na)	2025/01/22		105	%	80 - 120
				Total (Wet Wt) Strontium (Sr)	2025/01/22		101	%	80 - 120
				Total (Wet Wt) Thallium (Tl)	2025/01/22		106	%	80 - 120
				Total (Wet Wt) Tin (Sn)	2025/01/22		109	%	80 - 120
				Total (Wet Wt) Titanium (Ti)	2025/01/22		102	%	80 - 120
				Total (Wet Wt) Uranium (U)	2025/01/22		106	%	80 - 120
				Total (Wet Wt) Vanadium (V)	2025/01/22		106	%	80 - 120
				Total (Wet Wt) Zinc (Zn)	2025/01/22		106	%	80 - 120
B645263	MYO	Method Blank		Total (Wet Wt) Aluminum (Al)	2025/01/22	<0.50		mg/kg	



**BUREAU  
VERITAS**

Bureau Veritas Job #: C4A2459

Report Date: 2025/02/03

WSP Canada Inc.

Client Project #: CA0026317.6821-86000.04

Site Location: BAFFINLAND IRON MINE, MILNE  
PORT/REFERENCE SITE

Sampler Initials: DV

### QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B645263	MYO	RPD [DCF504-01]	Total (Wet Wt) Antimony (Sb)	2025/01/22	<0.0020		mg/kg	
			Total (Wet Wt) Arsenic (As)	2025/01/22	<0.0050		mg/kg	
			Total (Wet Wt) Barium (Ba)	2025/01/22	<0.010		mg/kg	
			Total (Wet Wt) Beryllium (Be)	2025/01/22	<0.0020		mg/kg	
			Total (Wet Wt) Bismuth (Bi)	2025/01/22	<0.0013		mg/kg	
			Total (Wet Wt) Boron (B)	2025/01/22	<0.20		mg/kg	
			Total (Wet Wt) Cadmium (Cd)	2025/01/22	<0.0013		mg/kg	
			Total (Wet Wt) Calcium (Ca)	2025/01/22	<4.0		mg/kg	
			Total (Wet Wt) Chromium (Cr)	2025/01/22	<0.025		mg/kg	
			Total (Wet Wt) Cobalt (Co)	2025/01/22	<0.0013		mg/kg	
			Total (Wet Wt) Copper (Cu)	2025/01/22	<0.013		mg/kg	
			Total (Wet Wt) Iron (Fe)	2025/01/22	<0.25		mg/kg	
			Total (Wet Wt) Lead (Pb)	2025/01/22	<0.0013		mg/kg	
			Total (Wet Wt) Magnesium (Mg)	2025/01/22	<0.40		mg/kg	
			Total (Wet Wt) Manganese (Mn)	2025/01/22	<0.010		mg/kg	
			Total (Wet Wt) Molybdenum (Mo)	2025/01/22	<0.0080		mg/kg	
			Total (Wet Wt) Nickel (Ni)	2025/01/22	<0.010		mg/kg	
			Total (Wet Wt) Phosphorus (P)	2025/01/22	<2.0		mg/kg	
			Total (Wet Wt) Potassium (K)	2025/01/22	<2.5		mg/kg	
			Total (Wet Wt) Selenium (Se)	2025/01/22	<0.010		mg/kg	
			Total (Wet Wt) Silver (Ag)	2025/01/22	<0.0013		mg/kg	
			Total (Wet Wt) Sodium (Na)	2025/01/22	<2.5		mg/kg	
			Total (Wet Wt) Strontium (Sr)	2025/01/22	<0.013		mg/kg	
			Total (Wet Wt) Thallium (Tl)	2025/01/22	<0.00040		mg/kg	
			Total (Wet Wt) Tin (Sn)	2025/01/22	<0.020		mg/kg	
			Total (Wet Wt) Titanium (Ti)	2025/01/22	<0.13		mg/kg	
			Total (Wet Wt) Uranium (U)	2025/01/22	<0.00040		mg/kg	
			Total (Wet Wt) Vanadium (V)	2025/01/22	<0.020		mg/kg	
			Total (Wet Wt) Zinc (Zn)	2025/01/22	<0.20		mg/kg	
			Total (Wet Wt) Aluminum (Al)	2025/01/22	3.2		%	40
			Total (Wet Wt) Antimony (Sb)	2025/01/22	18		%	40
			Total (Wet Wt) Arsenic (As)	2025/01/22	0.25		%	40
			Total (Wet Wt) Barium (Ba)	2025/01/22	0.59		%	40
			Total (Wet Wt) Beryllium (Be)	2025/01/22	16		%	40
			Total (Wet Wt) Bismuth (Bi)	2025/01/22	0.43		%	40
			Total (Wet Wt) Boron (B)	2025/01/22	2.7		%	40
			Total (Wet Wt) Cadmium (Cd)	2025/01/22	0.013		%	40
			Total (Wet Wt) Calcium (Ca)	2025/01/22	1.4		%	60
			Total (Wet Wt) Chromium (Cr)	2025/01/22	6.0		%	40
			Total (Wet Wt) Cobalt (Co)	2025/01/22	0.80		%	40
			Total (Wet Wt) Copper (Cu)	2025/01/22	2.4		%	40
			Total (Wet Wt) Iron (Fe)	2025/01/22	2.0		%	40
			Total (Wet Wt) Lead (Pb)	2025/01/22	19		%	40
			Total (Wet Wt) Magnesium (Mg)	2025/01/22	2.9		%	40
			Total (Wet Wt) Manganese (Mn)	2025/01/22	1.9		%	40
			Total (Wet Wt) Molybdenum (Mo)	2025/01/22	2.5		%	40
			Total (Wet Wt) Nickel (Ni)	2025/01/22	2.2		%	40
			Total (Wet Wt) Phosphorus (P)	2025/01/22	2.2		%	40
			Total (Wet Wt) Potassium (K)	2025/01/22	1.3		%	40
			Total (Wet Wt) Selenium (Se)	2025/01/22	3.1		%	40
			Total (Wet Wt) Silver (Ag)	2025/01/22	2.5		%	40
			Total (Wet Wt) Sodium (Na)	2025/01/22	2.8		%	40



### QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B645339	CG5	RPD [DCF504-01]	Total (Wet Wt) Strontium (Sr)	2025/01/22	0.16		%	60
			Total (Wet Wt) Thallium (Tl)	2025/01/22	4.7		%	40
			Total (Wet Wt) Tin (Sn)	2025/01/22	NC		%	40
			Total (Wet Wt) Titanium (Ti)	2025/01/22	9.0		%	40
			Total (Wet Wt) Uranium (U)	2025/01/22	2.4		%	40
			Total (Wet Wt) Vanadium (V)	2025/01/22	3.9		%	40
			Total (Wet Wt) Zinc (Zn)	2025/01/22	2.9		%	40
			Sample Wet Weight	2024/12/20	0.17		%	N/A
			Moisture	2024/12/20	0		%	20
B660368	RLC	QC Standard	Total (Wet Wt) Mercury (Hg)	2025/01/24		93	%	N/A
B660368	RLC	Spiked Blank	Total (Wet Wt) Mercury (Hg)	2025/01/24		119	%	80 - 120
B660368	RLC	Method Blank	Total (Wet Wt) Mercury (Hg)	2025/01/24	<0.0010		mg/kg	
B660368	RLC	RPD [DCF504-01]	Total (Wet Wt) Mercury (Hg)	2025/01/24	6.0		%	40
B673983	MYO	QC Standard	Total (Wet Wt) Calcium (Ca)	2025/01/30		92	%	75 - 125
			Total (Wet Wt) Iron (Fe)	2025/01/30		95	%	75 - 125
			Total (Wet Wt) Manganese (Mn)	2025/01/30		87	%	75 - 125
			Total (Wet Wt) Molybdenum (Mo)	2025/01/30		90	%	75 - 125
			Total (Wet Wt) Silver (Ag)	2025/01/30		88	%	75 - 125
			Total (Wet Wt) Thallium (Tl)	2025/01/30		82	%	75 - 125
			Total (Wet Wt) Aluminum (Al)	2025/01/30		89	%	80 - 120
			Total (Wet Wt) Calcium (Ca)	2025/01/30		108	%	80 - 120
			Total (Wet Wt) Chromium (Cr)	2025/01/30		97	%	80 - 120
			Total (Wet Wt) Iron (Fe)	2025/01/30		104	%	80 - 120
B673983	MYO	Spiked Blank	Total (Wet Wt) Manganese (Mn)	2025/01/30		97	%	80 - 120
			Total (Wet Wt) Molybdenum (Mo)	2025/01/30		101	%	80 - 120
			Total (Wet Wt) Silver (Ag)	2025/01/30		100	%	80 - 120
			Total (Wet Wt) Thallium (Tl)	2025/01/30		100	%	80 - 120
			Total (Wet Wt) Titanium (Ti)	2025/01/30		97	%	80 - 120
			Total (Wet Wt) Aluminum (Al)	2025/01/30	<0.50		mg/kg	
			Total (Wet Wt) Calcium (Ca)	2025/01/30	<4.0		mg/kg	
			Total (Wet Wt) Chromium (Cr)	2025/01/30	<0.025		mg/kg	
			Total (Wet Wt) Iron (Fe)	2025/01/30	<0.25		mg/kg	
			Total (Wet Wt) Manganese (Mn)	2025/01/30	<0.010		mg/kg	
B673983	MYO	Method Blank	Total (Wet Wt) Molybdenum (Mo)	2025/01/30	<0.0080		mg/kg	
			Total (Wet Wt) Silver (Ag)	2025/01/30	<0.0013		mg/kg	
			Total (Wet Wt) Thallium (Tl)	2025/01/30	<0.00040		mg/kg	
			Total (Wet Wt) Titanium (Ti)	2025/01/30	<0.13		mg/kg	

N/A = Not Applicable

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

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 (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

Bureau Veritas Job #: C4A2459

Report Date: 2025/02/03

WSP Canada Inc.

Client Project #: CA0026317.6821-86000.04

Site Location: BAFFINLAND IRON MINE, MILNE  
PORT/REFERENCE SITE

Sampler Initials: DV

### VALIDATION SIGNATURE PAGE

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

David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

Mauro Oselin, P.Chem., QP, 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 Raphael Kwan, General Manager, BC and Yukon Regions responsible for British Columbia Environmental laboratory operations.

2024/12/16 12:13



4606 Canada Way, Burnaby, BC V5G 1K5  
Tel: (604) 734-7276 Toll Free: (800) 665-8566



## ENV COC - 00015v3

Page 1 of 2

Invoice Information						Report Information (if differs from invoice)						Project Information											
Invoice to (requires report) I																							
Company : WSP Canada Inc.						Company:						Quotation #: C40127											
Contact Name: Collin Arens						Contact Name:						P.O. #/ AFER:											
Street Address: 16820 107 Ave.						Street Address:						Project #: CA0026317.6821-86000.04											
City: Edmonton Prov: AB Postal Code: T5P 4C3						City: Prov: Postal Code:						Site #:											
Phone: (780) 237-9638						Phone:						Site Location: Baffinland Iron Mine											
Email: collin.arenas@wsp.com						Email:						Site Location Province: Milne Port/Reference Site											
Copies: rainie.sharpe@wsp.com						Copies:						Sampled By: DV, MC, NOB											
Regulatory Criteria												Regular Turnaround Time (TAT)											
<input type="checkbox"/> BC CSR <input type="checkbox"/> CCME <input type="checkbox"/> Drinking Water												[ 5 to 7 Day ] 10 Day											
<input type="checkbox"/> YUKON CSR <input type="checkbox"/> BC Water Quality <input type="checkbox"/> Other:												Rush Turnaround Time (TAT) Surcharges apply											
SAMPLES MUST BE KEPT COOL (<10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS												Same Day [ ] 1 Day 2 Day [ ] 3 Day 4 Day [ ]											
Date Required: YY MM DD												Comments											
Sample Identification												# OF CONTAINERS SUBMITTED HOLD - DO NOT ANALYZE											
Date Sampled YY MM DD												Time (24hr) HH MM											
Matrix																							
1 BAFF24-MLN-HTAR-COMP-METALS-1 Tissue												1											
2 BAFF24-MLN-HTAR-COMP-METALS-2 Tissue												1											
3 BAFF24-MLN-HTAR-COMP-METALS-3 Tissue												1											
4 BAFF24-MLN-HTAR-COMP-METALS-4 Tissue												1											
5 BAFF24-MLN-HTAR-COMP-METALS-5 Tissue												1											
6 BAFF24-MLN-HTAR-COMP-METALS-6 Tissue												1											
7 BAFF24-MLN-HTAR-COMP-METALS-7 Tissue												1											
8 BAFF24-MLN-HTAR-COMP-METALS-8 Tissue												1											
9 BAFF24-REF-HTAR-COMP-METALS-1 Tissue												1											
10 BAFF24-REF-HTAR-COMP-METALS-2 Tissue												1											
11 BAFF24-REF-HTAR-COMP-METALS-3 Tissue												1											
12 BAFF24-REF-HTAR-COMP-METALS-4 Tissue												1											
LAB USE ONLY Yes No												LAB USE ONLY Yes No											
Seal present												Seal present											
Seal intact												Seal intact											
Cooling media present												Cooling media present											
Temperature reading by:												Special Instructions											
Relinquished by: (Signature/ Print)												Received by: (Signature/ Print)											
Date YY MM DD												Date YY MM DD											
Time HH MM												Time HH MM											
1 Halle Dyck 24 12 16 12 11												2 Hlanta Zamora 2024 12 18 09 15											

ICE Pack frozen

08546137



www.BVNA.com

4606 Canada Way, Burnaby, BC V5G 1K5  
Tel: (604) 734-7276 Toll Free: (800) 665-8566

CHAIN OF CUSTODY RECORD  
ENV COC - 00015v3

Page 2 of 2

[PAGE 1 REFERENCE]						CONTINUED																										
Company: WSP Canada Inc.		Contact Name: Collin Arens		Project #: CA0026317.6821-86000.04		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Comments				
FIELD FILTERED		FIELD PRESERVED		LAB FILTRATION REQUIRED		BTX/PH		VOCs		MTBE		BTX/EL		PAHs		LEPH/NEPH		PZ/44		TEH		Dissolved metals		Dissolved mercury		Total metals			Total mercury		# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
YY		MM		DD		HH		MM		Matrix																						
13	BAFF24-REF-HTAR-COMP-METALS-5					Tissue																									1	By tissue plug method
14	BAFF24-REF-HTAR-COMP-METALS-6					Tissue																									1	By tissue plug method
15																																
16																																
17																																
18																																
19																																
20																																
21																																
22																																
23																																
24																																
25																																
26																																
27																																
28																																
29																																
30																																
31	Bureau Veritas																															
32	RECEIVED IN VICTORIA																															
33	ICE: 443 CB: NO																															
34	DEC 16 2024 @ 12:13																															
35	By: SIMRAT BHATHAL																															
36	Temps: -1 / -1 / -1																															
37																																
38																																
39																																
40																																

CERTIFICATE OF ANALYSIS

Work Order	: YL2401157	Page	: 1 of 9
Client	: WSP Canada Inc.	Laboratory	: ALS Environmental - Yellowknife
Contact	: Connor Pettem	Account Manager	: Amber Springer
Address	: 840 Howe St, 10th Floor Vancouver BC Canada V6Z 2S9	Address	: 314 Old Airport Road, Unit 116 Yellowknife NT Canada X1A 3T3
Telephone	: ----	Telephone	: +1 867 873 5593
Project	: CA0026317.6821/86000/03	Date Samples Received	: 12-Aug-2024 11:24
PO	: ----	Date Analysis Commenced	: 15-Aug-2024
C-O-C number	: ----	Issue Date	: 23-Aug-2024 13:16
Sampler	: TT/MR/DV		
Site	: Baffinland Milne Port		
Quote number	: VA24-GOLD100-011		
No. of samples received	: 4		
No. of samples analysed	: 4		

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

Signatories	Position	Laboratory Department
Angelo Salandanan	Lab Assistant	Metals, Burnaby, British Columbia
Dan Gebert	Laboratory Analyst	Metals, Burnaby, British Columbia
Janice Leung	Supervisor - Organics Instrumentation	Organics, Burnaby, British Columbia
Maya Urquhart	Lab Analyst	Metals, Burnaby, British Columbia
Monica Ko	Lab Assistant	Inorganics, Burnaby, British Columbia
Robin Weeks	Team Leader - Metals	Metals, Burnaby, British Columbia
Tracy Harley	Supervisor - Water Quality Instrumentation	Inorganics, Burnaby, British Columbia



## General Comments

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

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

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

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

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

Unit	Description
-	no units
µg/L	micrograms per litre
µS/cm	microsiemens per centimetre
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units
psu	practical salinity units

<: less than.

>: greater than.

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

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

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

## Qualifiers

Qualifier	Description
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
DTC	Dissolved concentration exceeds total. Results were confirmed by re-analysis.
RRV	Reported result verified by repeat analysis.



Analytical Results

Sub-Matrix: Seawater			Client sample ID		Ref-1	KLK-Ref-1	TGT-Ref-1	DUP-F	----
(Matrix: Water)									
Client sampling date / time					09-Aug-2024 09:17	09-Aug-2024 09:30	09-Aug-2024 12:30	09-Aug-2024 00:00	----
Analyte	CAS Number	Method/Lab	LOR	Unit	YL2401157-001	YL2401157-002	YL2401157-003	YL2401157-004	-----
					Result	Result	Result	Result	----
Physical Tests									
Alkalinity, total (as CaCO3)	----	E290/VA	1.0	mg/L	<1.0	95.5	104	95.5	----
Conductivity	----	E100S/VA	2.0	µS/cm	2.0	37600	42500	37400	----
pH	----	E108/VA	0.10	pH units	5.54	8.02	8.01	8.00	----
Salinity	----	EC100S/VA	1.0	psu	<1.0	24.8	28.4	24.6	----
Solids, total dissolved [TDS]	----	E162S/VA	10	mg/L	<10	35700	40000	35500	----
Solids, total suspended [TSS]	----	E160S/VA	2.0	mg/L	<2.0	<2.0	<2.0	<2.0	----
Turbidity	----	E121/VA	0.10	NTU	<0.10	0.28	0.11	0.30	----
Hardness (as CaCO3), dissolved	----	EC100/VA	0.50	mg/L	<1.00	4960	5330	4860	----
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.50	mg/L	<1.00	4920	5460	4890	----
Anions and Nutrients									
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	----
Bromide	24959-67-9	E235S.Br/VA	5.0	mg/L	<5.0	45.4	52.8	46.2	----
Chloride	16887-00-6	E235S.Cl/VA	50	mg/L	<50	13500	15600	13800	----
Fluoride	16984-48-8	E235S.F-L/VA	0.20	mg/L	<0.20	0.72	0.78	0.73	----
Kjeldahl nitrogen, total [TKN]	----	E318S/VA	0.050	mg/L	<0.050	<0.100 <sup>DLM</sup>	0.112	0.107	----
Nitrate (as N)	14797-55-8	E235S.NO3-T/ VA	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	----
Nitrite (as N)	14797-65-0	E235S.NO2-L/ VA	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	----
Phosphorus, total	7723-14-0	E372S/VA	0.0020	mg/L	<0.0020	0.0170	0.0202	0.0185	----
Phosphorus, total dissolved	7723-14-0	E375-T/VA	0.0020	mg/L	<0.0020	0.0159	0.0187	0.0157	----
Sulfate (as SO4)	14808-79-8	E235S.SO4-L/ VA	3.0	mg/L	<3.0	1910	2150	1910	----
Organic / Inorganic Carbon									
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L	<0.50	0.96	1.00	0.87	----
Carbon, total organic [TOC]	----	E355-L/VA	0.50	mg/L	<0.50	0.82	0.79	0.82	----
Total Metals									
Aluminum, total	7429-90-5	E466S/VA	0.0050	mg/L	<0.0050	0.0096	0.0111	0.0111	----
Antimony, total	7440-36-0	E466S/VA	0.0010	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	----
Arsenic, total	7440-38-2	E466S/VA	0.00040	mg/L	<0.00040	0.00359	0.00401	0.00388	----





Analytical Results

Sub-Matrix: Seawater

Client sample ID

(Matrix: Water)

					Ref-1	KLK-Ref-1	TGT-Ref-1	DUP-F	----
Client sampling date / time					09-Aug-2024 09:17	09-Aug-2024 09:30	09-Aug-2024 12:30	09-Aug-2024 00:00	----
Analyte	CAS Number	Method/Lab	LOR	Unit	YL2401157-001	YL2401157-002	YL2401157-003	YL2401157-004	-----
					Result	Result	Result	Result	----
Total Metals									
Barium, total	7440-39-3	E466S/VA	0.0010	mg/L	<0.0010	0.0085	0.0082	0.0089	----
Beryllium, total	7440-41-7	E466S/VA	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	----
Bismuth, total	7440-69-9	E466S/VA	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	----
Boron, total	7440-42-8	E466S/VA	0.30	mg/L	<0.30	3.34	3.66	3.44	----
Cadmium, total	7440-43-9	E466S/VA	0.000020	mg/L	<0.000020	0.000021	0.000036	0.000021	----
Calcium, total	7440-70-2	E466S/VA	1.0	mg/L	<1.0	323	357	331	----
Cesium, total	7440-46-2	E466S/VA	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	----
Chromium, total	7440-47-3	E466S/VA	0.00050	mg/L	<0.00050	<0.00050	<0.00050	0.00060	----
Cobalt, total	7440-48-4	E466S/VA	0.000050	mg/L	<0.000050	0.000061	0.000067	0.000070	----
Copper, total	7440-50-8	E466S/VA	0.00050	mg/L	<0.00050	0.00929	0.0122	0.00302	----
Gallium, total	7440-55-3	E466S/VA	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	----
Iron, total	7439-89-6	E466S/VA	0.010	mg/L	<0.010	0.012	0.012	0.016	----
Lead, total	7439-92-1	E466S/VA	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	----
Lithium, total	7439-93-2	E466S/VA	0.020	mg/L	<0.020	0.144	0.157	0.148	----
Magnesium, total	7439-95-4	E466S/VA	1.0	mg/L	<1.0	1000	1110	986	----
Manganese, total	7439-96-5	E466S/VA	0.00020	mg/L	<0.00020	0.00095	0.00081	0.00110	----
Mercury, total	7439-97-6	E508S/VA	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	----
Molybdenum, total	7439-98-7	E466S/VA	0.00010	mg/L	<0.00010	0.00809	0.00867	0.00853	----
Nickel, total	7440-02-0	E466S/VA	0.00050	mg/L	<0.00050	<0.00050	<0.00050	0.00063	----
Phosphorus, total	7723-14-0	E466S/VA	0.050	mg/L	<0.050	<0.050	<0.050	<0.050	----
Potassium, total	7440-09-7	E466S/VA	1.0	mg/L	<1.0	287	320	298	----
Rhenium, total	7440-15-5	E466S/VA	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	----
Rubidium, total	7440-17-7	E466S/VA	0.0050	mg/L	<0.0050	0.0805	0.0896	0.0873	----
Selenium, total	7782-49-2	E466S/VA	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	----
Silicon, total	7440-21-3	E468S.NaSi/V A	1.0	mg/L	<1.0	<1.0	<1.0	<1.0	----
Silver, total	7440-22-4	E466S/VA	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	----
Sodium, total	7440-23-5	E468S.NaSi/V A	2.5	mg/L	<2.5	7600	8360	7750	----
Strontium, total	7440-24-6	E466S/VA	0.010	mg/L	<0.010	5.47	6.14	5.97	----



Analytical Results

Sub-Matrix: Seawater

Client sample ID

(Matrix: Water)

					Ref-1	KLK-Ref-1	TGT-Ref-1	DUP-F	----
Client sampling date / time					09-Aug-2024 09:17	09-Aug-2024 09:30	09-Aug-2024 12:30	09-Aug-2024 00:00	----
Analyte	CAS Number	Method/Lab	LOR	Unit	YL2401157-001	YL2401157-002	YL2401157-003	YL2401157-004	-----
					Result	Result	Result	Result	----
Total Metals									
Sulfur, total	7704-34-9	E466S/VA	5.0	mg/L	<5.0	704	787	743	----
Tellurium, total	13494-80-9	E466S/VA	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	----
Thallium, total	7440-28-0	E466S/VA	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	----
Thorium, total	7440-29-1	E466S/VA	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	----
Tin, total	7440-31-5	E466S/VA	0.0010	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	----
Titanium, total	7440-32-6	E466S/VA	0.0050	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	----
Tungsten, total	7440-33-7	E466S/VA	0.0010	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	----
Uranium, total	7440-61-1	E466S/VA	0.000050	mg/L	<0.000050	0.00246	0.00268	0.00243	----
Vanadium, total	7440-62-2	E466S/VA	0.00050	mg/L	<0.00050	0.00093	0.00105	0.00095	----
Yttrium, total	7440-65-5	E466S/VA	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	----
Zinc, total	7440-66-6	E466S/VA	0.0030	mg/L	<0.0030	<0.0030	<0.0030	<0.0030	----
Zirconium, total	7440-67-7	E466S/VA	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	----
Dissolved Metals									
Aluminum, dissolved	7429-90-5	E465S/VA	0.0050	mg/L	<0.0050	<0.0050	0.0061	<0.0050	----
Antimony, dissolved	7440-36-0	E465S/VA	0.0010	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	----
Arsenic, dissolved	7440-38-2	E465S/VA	0.00040	mg/L	<0.00040	0.00289	0.00325	0.00301	----
Barium, dissolved	7440-39-3	E465S/VA	0.0010	mg/L	<0.0010	0.0087	0.0084	0.0086	----
Beryllium, dissolved	7440-41-7	E465S/VA	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	----
Bismuth, dissolved	7440-69-9	E465S/VA	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	----
Boron, dissolved	7440-42-8	E465S/VA	0.30	mg/L	<0.30	3.51	3.88	3.56	----
Cadmium, dissolved	7440-43-9	E465S/VA	0.000020	mg/L	<0.000020	<0.000020	0.000038	0.000022	----
Calcium, dissolved	7440-70-2	E465S/VA	1.0	mg/L	<1.0	320	352	325	----
Cesium, dissolved	7440-46-2	E465S/VA	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	----
Chromium, dissolved	7440-47-3	E465S/VA	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	----
Cobalt, dissolved	7440-48-4	E465S/VA	0.000050	mg/L	<0.000050	<0.000050	0.000081	0.000061	----
Copper, dissolved	7440-50-8	E465S/VA	0.00050	mg/L	<0.00050	<0.00050	0.00160	<0.00050	----
Gallium, dissolved	7440-55-3	E465S/VA	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	----
Iron, dissolved	7439-89-6	E465S/VA	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	----
Lead, dissolved	7439-92-1	E465S/VA	0.00010	mg/L	<0.00010	<0.00010	0.00175 <sup>DTC</sup>	<0.00010	----
Lithium, dissolved	7439-93-2	E465S/VA	0.020	mg/L	<0.020	0.142	0.155	0.136	----





Analytical Results

Sub-Matrix: Seawater					Client sample ID	Ref-1	KLK-Ref-1	TGT-Ref-1	DUP-F	----
(Matrix: Water)										
Client sampling date / time										
					09-Aug-2024 09:17	09-Aug-2024 09:30	09-Aug-2024 12:30	09-Aug-2024 00:00		----
Analyte	CAS Number	Method/Lab	LOR	Unit	YL2401157-001	YL2401157-002	YL2401157-003	YL2401157-004	-----	
					Result	Result	Result	Result	----	
Dissolved Metals										
Magnesium, dissolved	7439-95-4	E465S/VA	1.0	mg/L	<1.0	1010	1080	983		----
Manganese, dissolved	7439-96-5	E465S/VA	0.00010	mg/L	<0.00010	0.00062	0.00104	0.00059		----
Mercury, dissolved	7439-97-6	E509S/VA	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050		----
Molybdenum, dissolved	7439-98-7	E465S/VA	0.00010	mg/L	<0.00010	0.00734	0.00780	0.00705		----
Nickel, dissolved	7440-02-0	E465S/VA	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050		----
Phosphorus, dissolved	7723-14-0	E465S/VA	0.050	mg/L	<0.050	<0.050	<0.050	<0.050		----
Potassium, dissolved	7440-09-7	E465S/VA	1.0	mg/L	<1.0	288	315	288		----
Rhenium, dissolved	7440-15-5	E465S/VA	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050		----
Rubidium, dissolved	7440-17-7	E465S/VA	0.0050	mg/L	<0.0050	0.0744	0.0816	0.0737		----
Selenium, dissolved	7782-49-2	E465S/VA	0.00050	mg/L	<0.00050	<0.00050	0.00072	0.00062		----
Silicon, dissolved	7440-21-3	E469S.NaSi/V A	1.0	mg/L	<1.0	<1.0	<1.0	<1.0		----
Silver, dissolved	7440-22-4	E465S/VA	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010		----
Sodium, dissolved	7440-23-5	E469S.NaSi/V A	2.5	mg/L	<2.5	7170	7840	7520		----
Strontium, dissolved	7440-24-6	E465S/VA	0.010	mg/L	<0.010	5.05	5.51	4.99		----
Sulfur, dissolved	7704-34-9	E465S/VA	5.0	mg/L	<5.0	690	758	678		----
Tellurium, dissolved	13494-80-9	E465S/VA	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050		----
Thallium, dissolved	7440-28-0	E465S/VA	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050		----
Thorium, dissolved	7440-29-1	E465S/VA	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050		----
Tin, dissolved	7440-31-5	E465S/VA	0.0010	mg/L	<0.0010	<0.0010	<0.0010	<0.0010		----
Titanium, dissolved	7440-32-6	E465S/VA	0.0050	mg/L	<0.0050	<0.0050	<0.0050	<0.0050		----
Tungsten, dissolved	7440-33-7	E465S/VA	0.0010	mg/L	<0.0010	<0.0010	<0.0010	<0.0010		----
Uranium, dissolved	7440-61-1	E465S/VA	0.000050	mg/L	<0.000050	0.00244	0.00261	0.00250		----
Vanadium, dissolved	7440-62-2	E465S/VA	0.00050	mg/L	<0.00050	0.00088	0.00094	0.00085		----
Yttrium, dissolved	7440-65-5	E465S/VA	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050		----
Zinc, dissolved	7440-66-6	E465S/VA	0.0010	mg/L	0.0016 <sup>RRV</sup>	<0.0010	0.0200 <sup>DTC</sup>	<0.0010		----
Zirconium, dissolved	7440-67-7	E465S/VA	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050		----
Dissolved mercury filtration location	----	EP509/VA	-	-	Field	Field	Field	Field		----
Dissolved metals filtration location	----	EP421S/VA	-	-	Field	Field	Field	Field		----



Analytical Results

Sub-Matrix: Seawater					Client sample ID	Ref-1	KLK-Ref-1	TGT-Ref-1	DUP-F	----
(Matrix: Water)										
Client sampling date / time					09-Aug-2024 09:17	09-Aug-2024 09:30	09-Aug-2024 12:30	09-Aug-2024 00:00	----	
Analyte	CAS Number	Method/Lab	LOR	Unit	YL2401157-001	YL2401157-002	YL2401157-003	YL2401157-004	-----	
					Result	Result	Result	Result	----	
Dissolved Metals										
Dissolved metals filtration location	---	EP421/VA	-	-	Field	Field	Field	Field		----
Volatile Organic Compounds [Fuels]										
Benzene	71-43-2	E611A/VA	0.50	µg/L	<0.50	<0.50	<0.50	<0.50		----
Ethylbenzene	100-41-4	E611A/VA	0.50	µg/L	<0.50	<0.50	<0.50	<0.50		----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A/VA	0.50	µg/L	<0.50	<0.50	<0.50	<0.50		----
Styrene	100-42-5	E611A/VA	0.50	µg/L	<0.50	<0.50	<0.50	<0.50		----
Toluene	108-88-3	E611A/VA	0.50	µg/L	<0.50	<0.50	<0.50	<0.50		----
Xylene, m+p-	179601-23-1	E611A/VA	0.40	µg/L	<0.40	<0.40	<0.40	<0.40		----
Xylene, o-	95-47-6	E611A/VA	0.30	µg/L	<0.30	<0.30	<0.30	<0.30		----
Xylenes, total	1330-20-7	E611A/VA	0.50	µg/L	<0.50	<0.50	<0.50	<0.50		----
Hydrocarbons										
EPH (C10-C19)	---	E601A/VA	250	µg/L	<250	<250	<250	<250		----
EPH (C19-C32)	---	E601A/VA	250	µg/L	<250	<250	<250	<250		----
F2 (C10-C16)	---	E601/VA	100	µg/L	<100	<100	<100	<100		----
F3 (C16-C34)	---	E601/VA	250	µg/L	<250	<250	<250	<250		----
F4 (C34-C50)	---	E601/VA	250	µg/L	<250	<250	<250	<250		----
TEH (C10-C50)	n/a	E601/VA	400	µg/L	<400	<400	<400	<400		----
TEH (C16-C50)	---	E601/VA	400	µg/L	<400	<400	<400	<400		----
VHw (C6-C10)	---	E581.VH+F1/ VA	100	µg/L	<100	<100	<100	<100		----
F1-BTEX	---	EC580/VA	100	µg/L	<100	<100	<100	<100		----
HEPHw	---	EC600A/VA	250	µg/L	<250	<250	<250	<250		----
LEPHw	---	EC600A/VA	250	µg/L	<250	<250	<250	<250		----
VPHw	---	EC580A/VA	100	µg/L	<100	<100	<100	<100		----
F1 (C6-C10)	---	E581.VH+F1/ VA	100	µg/L	<100	<100	<100	<100		----
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (EPH surrogate)	392-83-6	E601A/VA	1.0	%	84.6	78.6	80.5	83.7		----
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/VA	1.0	%	85.2	81.6	80.6	87.0		----
Dichlorotoluene, 3,4-	95-75-0	E581.VH+F1/ VA	1.0	%	124	90.1	95.7	93.0		----



Analytical Results

Sub-Matrix: Seawater					Client sample ID	Ref-1	KLK-Ref-1	TGT-Ref-1	DUP-F	----
(Matrix: Water)										
Client sampling date / time					09-Aug-2024 09:17	09-Aug-2024 09:30	09-Aug-2024 12:30	09-Aug-2024 00:00	----	
Analyte	CAS Number	Method/Lab	LOR	Unit	YL2401157-001	YL2401157-002	YL2401157-003	YL2401157-004	-----	
					Result	Result	Result	Result	----	
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611A/VA	1.0	%	88.2	83.2	82.7	82.0	----	
Difluorobenzene, 1,4-	540-36-3	E611A/VA	1.0	%	102	101	100	99.7	----	
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A/VA	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----	
Acenaphthylene	208-96-8	E641A/VA	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----	
Acridine	260-94-6	E641A/VA	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----	
Anthracene	120-12-7	E641A/VA	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----	
Benz(a)anthracene	56-55-3	E641A/VA	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----	
Benzo(a)pyrene	50-32-8	E641A/VA	0.0050	µg/L	<0.0050	<0.0050	<0.0050	<0.0050	----	
Benzo(b+j)fluoranthene	n/a	E641A/VA	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----	
Benzo(b+j+k)fluoranthene	n/a	E641A/VA	0.015	µg/L	<0.015	<0.015	<0.015	<0.015	----	
Benzo(g,h,i)perylene	191-24-2	E641A/VA	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----	
Benzo(k)fluoranthene	207-08-9	E641A/VA	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----	
Chrysene	218-01-9	E641A/VA	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----	
Dibenz(a,h)anthracene	53-70-3	E641A/VA	0.0050	µg/L	<0.0050	<0.0050	<0.0050	<0.0050	----	
Fluoranthene	206-44-0	E641A/VA	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----	
Fluorene	86-73-7	E641A/VA	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----	
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/VA	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----	
Methylnaphthalene, 1-	90-12-0	E641A/VA	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----	
Methylnaphthalene, 2-	91-57-6	E641A/VA	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----	
Naphthalene	91-20-3	E641A/VA	0.050	µg/L	<0.050	<0.050	<0.050	<0.050	----	
Phenanthrene	85-01-8	E641A/VA	0.020	µg/L	<0.020	<0.020	<0.020	<0.020	----	
Pyrene	129-00-0	E641A/VA	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----	
Quinoline	91-22-5	E641A/VA	0.050	µg/L	<0.050	<0.050	<0.050	<0.050	----	
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A/VA	0.1	%	113	97.7	97.4	94.2	----	
Naphthalene-d8	1146-65-2	E641A/VA	0.1	%	99.1	89.6	93.1	93.8	----	
Phenanthrene-d10	1517-22-2	E641A/VA	0.1	%	105	96.2	99.2	96.4	----	

Page : 9 of 9  
Work Order : YL2401157  
Client : WSP Canada Inc.  
Project : CA0026317.6821/86000/03

---



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

Please refer to the Accreditation section for an explanation of analyte accreditations.

## QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: YL2401157	Page	: 1 of 24
Client	: WSP Canada Inc.	Laboratory	: ALS Environmental - Yellowknife
Contact	: Connor Pettem	Account Manager	: Amber Springer
Address	: 840 Howe St, 10th Floor Vancouver BC Canada V6Z 2S9	Address	: 314 Old Airport Road, Unit 116 Yellowknife, Northwest Territories Canada X1A 3T3
Telephone	: ----	Telephone	: +1 867 873 5593
Project	: CA0026317.6821/86000/03	Date Samples Received	: 12-Aug-2024 11:24
PO	: ----	Issue Date	: 23-Aug-2024 13:13
C-O-C number	: ----		
Sampler	: TT/MR/DV		
Site	: Baffinland Milne Port		
Quote number	: VA24-GOLD100-011		
No. of samples received	: 4		
No. of samples analysed	: 4		

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

### Key

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

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

DQO: Data Quality Objective.

LOR: Limit of Reporting (detection limit).

RPD: Relative Percent Difference.

### Workorder Comments

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

### Summary of Outliers

#### Outliers : Quality Control Samples

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

#### Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

### ***Outliers : Analysis Holding Time Compliance (Breaches)***

- Analysis Holding Time Outliers exist - please see following pages for full details.

### ***Outliers : Frequency of Quality Control Samples***

- No Quality Control Sample Frequency Outliers occur.



## Analysis Holding Time Compliance

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

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

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

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

Matrix: **Water**

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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) DUP-F	E298	09-Aug-2024	15-Aug-2024	28 days	6 days	✓	17-Aug-2024	28 days	7 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) TGT-Ref-1	E298	09-Aug-2024	15-Aug-2024	28 days	6 days	✓	17-Aug-2024	28 days	7 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) KLK-Ref-1	E298	09-Aug-2024	15-Aug-2024	28 days	7 days	✓	17-Aug-2024	28 days	8 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) Ref-1	E298	09-Aug-2024	15-Aug-2024	28 days	7 days	✓	17-Aug-2024	28 days	8 days	✓
Anions and Nutrients : Bromide in Seawater by IC										
HDPE DUP-F	E235S.Br	09-Aug-2024	16-Aug-2024	28 days	7 days	✓	16-Aug-2024	28 days	7 days	✓
Anions and Nutrients : Bromide in Seawater by IC										
HDPE KLK-Ref-1	E235S.Br	09-Aug-2024	16-Aug-2024	28 days	7 days	✓	16-Aug-2024	28 days	7 days	✓
Anions and Nutrients : Bromide in Seawater by IC										
HDPE Ref-1	E235S.Br	09-Aug-2024	16-Aug-2024	28 days	7 days	✓	16-Aug-2024	28 days	7 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method	Method	Sampling Date	Extraction / Preparation				Analysis			
Container / Client Sample ID(s)			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Bromide in Seawater by IC										
HDPE TGT-Ref-1	E235S.Br	09-Aug-2024	16-Aug-2024	28 days	7 days	✓	16-Aug-2024	28 days	7 days	✓
Anions and Nutrients : Chloride in Seawater by IC										
HDPE DUP-F	E235S.Cl	09-Aug-2024	16-Aug-2024	28 days	7 days	✓	16-Aug-2024	28 days	7 days	✓
Anions and Nutrients : Chloride in Seawater by IC										
HDPE KLK-Ref-1	E235S.Cl	09-Aug-2024	16-Aug-2024	28 days	7 days	✓	16-Aug-2024	28 days	7 days	✓
Anions and Nutrients : Chloride in Seawater by IC										
HDPE Ref-1	E235S.Cl	09-Aug-2024	16-Aug-2024	28 days	7 days	✓	16-Aug-2024	28 days	7 days	✓
Anions and Nutrients : Chloride in Seawater by IC										
HDPE TGT-Ref-1	E235S.Cl	09-Aug-2024	16-Aug-2024	28 days	7 days	✓	16-Aug-2024	28 days	7 days	✓
Anions and Nutrients : Fluoride in Seawater by IC (Low Level)										
HDPE DUP-F	E235S.F-L	09-Aug-2024	16-Aug-2024	28 days	7 days	✓	16-Aug-2024	28 days	7 days	✓
Anions and Nutrients : Fluoride in Seawater by IC (Low Level)										
HDPE KLK-Ref-1	E235S.F-L	09-Aug-2024	16-Aug-2024	28 days	7 days	✓	16-Aug-2024	28 days	7 days	✓
Anions and Nutrients : Fluoride in Seawater by IC (Low Level)										
HDPE Ref-1	E235S.F-L	09-Aug-2024	16-Aug-2024	28 days	7 days	✓	16-Aug-2024	28 days	7 days	✓
Anions and Nutrients : Fluoride in Seawater by IC (Low Level)										
HDPE TGT-Ref-1	E235S.F-L	09-Aug-2024	16-Aug-2024	28 days	7 days	✓	16-Aug-2024	28 days	7 days	✓





Matrix: **Water** Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Nitrate in Seawater by IC (Trace Level)										
HDPE DUP-F	E235S.NO3-T	09-Aug-2024	16-Aug-2024	3 days	6 days	✖ EHTL	16-Aug-2024	3 days	6 days	✖ EHTL
Anions and Nutrients : Nitrate in Seawater by IC (Trace Level)										
HDPE KLK-Ref-1	E235S.NO3-T	09-Aug-2024	16-Aug-2024	3 days	6 days	✖ EHTL	16-Aug-2024	3 days	6 days	✖ EHTL
Anions and Nutrients : Nitrate in Seawater by IC (Trace Level)										
HDPE Ref-1	E235S.NO3-T	09-Aug-2024	16-Aug-2024	3 days	6 days	✖ EHTL	16-Aug-2024	3 days	6 days	✖ EHTL
Anions and Nutrients : Nitrate in Seawater by IC (Trace Level)										
HDPE TGT-Ref-1	E235S.NO3-T	09-Aug-2024	16-Aug-2024	3 days	6 days	✖ EHTL	16-Aug-2024	3 days	6 days	✖ EHTL
Anions and Nutrients : Nitrite in Seawater by IC (Low Level)										
HDPE DUP-F	E235S.NO2-L	09-Aug-2024	16-Aug-2024	3 days	6 days	✖ EHTL	16-Aug-2024	3 days	6 days	✖ EHTL
Anions and Nutrients : Nitrite in Seawater by IC (Low Level)										
HDPE KLK-Ref-1	E235S.NO2-L	09-Aug-2024	16-Aug-2024	3 days	6 days	✖ EHTL	16-Aug-2024	3 days	6 days	✖ EHTL
Anions and Nutrients : Nitrite in Seawater by IC (Low Level)										
HDPE Ref-1	E235S.NO2-L	09-Aug-2024	16-Aug-2024	3 days	6 days	✖ EHTL	16-Aug-2024	3 days	6 days	✖ EHTL
Anions and Nutrients : Nitrite in Seawater by IC (Low Level)										
HDPE TGT-Ref-1	E235S.NO2-L	09-Aug-2024	16-Aug-2024	3 days	6 days	✖ EHTL	16-Aug-2024	3 days	6 days	✖ EHTL
Anions and Nutrients : Sulfate in Seawater by IC (Low Level)										
HDPE DUP-F	E235S.SO4-L	09-Aug-2024	16-Aug-2024	28 days	7 days	✔	16-Aug-2024	28 days	7 days	✔



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method	Method	Sampling Date	Extraction / Preparation				Analysis			
Container / Client Sample ID(s)			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Sulfate in Seawater by IC (Low Level)										
HDPE KLK-Ref-1	E235S.S04-L	09-Aug-2024	16-Aug-2024	28 days	7 days	✓	16-Aug-2024	28 days	7 days	✓
Anions and Nutrients : Sulfate in Seawater by IC (Low Level)										
HDPE Ref-1	E235S.S04-L	09-Aug-2024	16-Aug-2024	28 days	7 days	✓	16-Aug-2024	28 days	7 days	✓
Anions and Nutrients : Sulfate in Seawater by IC (Low Level)										
HDPE TGT-Ref-1	E235S.S04-L	09-Aug-2024	16-Aug-2024	28 days	7 days	✓	16-Aug-2024	28 days	7 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass dissolved (sulfuric acid) DUP-F	E375-T	09-Aug-2024	16-Aug-2024	28 days	6 days	✓	17-Aug-2024	28 days	8 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass dissolved (sulfuric acid) TGT-Ref-1	E375-T	09-Aug-2024	16-Aug-2024	28 days	6 days	✓	17-Aug-2024	28 days	8 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass dissolved (sulfuric acid) KLK-Ref-1	E375-T	09-Aug-2024	16-Aug-2024	28 days	7 days	✓	17-Aug-2024	28 days	8 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass dissolved (sulfuric acid) Ref-1	E375-T	09-Aug-2024	16-Aug-2024	28 days	7 days	✓	17-Aug-2024	28 days	8 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen in Seawater by Fluorescence										
Amber glass total (sulfuric acid) DUP-F	E318S	09-Aug-2024	15-Aug-2024	28 days	6 days	✓	18-Aug-2024	28 days	9 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen in Seawater by Fluorescence										
Amber glass total (sulfuric acid) TGT-Ref-1	E318S	09-Aug-2024	15-Aug-2024	28 days	6 days	✓	18-Aug-2024	28 days	9 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Total Kjeldahl Nitrogen in Seawater by Fluorescence										
Amber glass total (sulfuric acid) KLK-Ref-1	E318S	09-Aug-2024	15-Aug-2024	28 days	7 days	✓	18-Aug-2024	28 days	9 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen in Seawater by Fluorescence										
Amber glass total (sulfuric acid) Ref-1	E318S	09-Aug-2024	15-Aug-2024	28 days	7 days	✓	18-Aug-2024	28 days	9 days	✓
Anions and Nutrients : Total Phosphorus in Seawater by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) DUP-F	E372S	09-Aug-2024	15-Aug-2024	28 days	6 days	✓	17-Aug-2024	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus in Seawater by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) TGT-Ref-1	E372S	09-Aug-2024	15-Aug-2024	28 days	6 days	✓	17-Aug-2024	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus in Seawater by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) KLK-Ref-1	E372S	09-Aug-2024	15-Aug-2024	28 days	7 days	✓	17-Aug-2024	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus in Seawater by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) Ref-1	E372S	09-Aug-2024	15-Aug-2024	28 days	7 days	✓	17-Aug-2024	28 days	8 days	✓
Dissolved Metals : Dissolved Mercury in Seawater by CVAAS										
Glass vial dissolved (hydrochloric acid) DUP-F	E509S	09-Aug-2024	20-Aug-2024	28 days	11 days	✓	20-Aug-2024	28 days	11 days	✓
Dissolved Metals : Dissolved Mercury in Seawater by CVAAS										
Glass vial dissolved (hydrochloric acid) KLK-Ref-1	E509S	09-Aug-2024	20-Aug-2024	28 days	11 days	✓	20-Aug-2024	28 days	11 days	✓
Dissolved Metals : Dissolved Mercury in Seawater by CVAAS										
Glass vial dissolved (hydrochloric acid) Ref-1	E509S	09-Aug-2024	20-Aug-2024	28 days	11 days	✓	20-Aug-2024	28 days	11 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method	Method	Sampling Date	Extraction / Preparation				Analysis			
Container / Client Sample ID(s)			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Dissolved Metals : Dissolved Mercury in Seawater by CVAAS										
Glass vial dissolved (hydrochloric acid) TGT-Ref-1	E509S	09-Aug-2024	20-Aug-2024	28 days	11 days	✓	20-Aug-2024	28 days	11 days	✓
Dissolved Metals : Dissolved Metals in Seawater by Triple Quad ICPMS										
HDPE dissolved (nitric acid) DUP-F	E465S	09-Aug-2024	16-Aug-2024	180 days	7 days	✓	18-Aug-2024	180 days	9 days	✓
Dissolved Metals : Dissolved Metals in Seawater by Triple Quad ICPMS										
HDPE dissolved (nitric acid) KLK-Ref-1	E465S	09-Aug-2024	16-Aug-2024	180 days	7 days	✓	18-Aug-2024	180 days	9 days	✓
Dissolved Metals : Dissolved Metals in Seawater by Triple Quad ICPMS										
HDPE dissolved (nitric acid) Ref-1	E465S	09-Aug-2024	16-Aug-2024	180 days	7 days	✓	18-Aug-2024	180 days	9 days	✓
Dissolved Metals : Dissolved Metals in Seawater by Triple Quad ICPMS										
HDPE dissolved (nitric acid) TGT-Ref-1	E465S	09-Aug-2024	16-Aug-2024	180 days	7 days	✓	18-Aug-2024	180 days	9 days	✓
Dissolved Metals : Dissolved Sodium and Silicon in Seawater by CRC ICPMS										
HDPE dissolved (nitric acid) DUP-F	E469S.NaSi	09-Aug-2024	16-Aug-2024	180 days	7 days	✓	17-Aug-2024	180 days	8 days	✓
Dissolved Metals : Dissolved Sodium and Silicon in Seawater by CRC ICPMS										
HDPE dissolved (nitric acid) KLK-Ref-1	E469S.NaSi	09-Aug-2024	16-Aug-2024	180 days	7 days	✓	17-Aug-2024	180 days	8 days	✓
Dissolved Metals : Dissolved Sodium and Silicon in Seawater by CRC ICPMS										
HDPE dissolved (nitric acid) Ref-1	E469S.NaSi	09-Aug-2024	16-Aug-2024	180 days	7 days	✓	17-Aug-2024	180 days	8 days	✓
Dissolved Metals : Dissolved Sodium and Silicon in Seawater by CRC ICPMS										
HDPE dissolved (nitric acid) TGT-Ref-1	E469S.NaSi	09-Aug-2024	16-Aug-2024	180 days	7 days	✓	17-Aug-2024	180 days	8 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method	Method	Sampling Date	Extraction / Preparation				Analysis			
Container / Client Sample ID(s)			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Hydrocarbons : BC PHCs - EPH by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) DUP-F	E601A	09-Aug-2024	16-Aug-2024	14 days	6 days	✓	16-Aug-2024	40 days	0 days	✓
Hydrocarbons : BC PHCs - EPH by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) KLK-Ref-1	E601A	09-Aug-2024	16-Aug-2024	14 days	7 days	✓	16-Aug-2024	40 days	0 days	✓
Hydrocarbons : BC PHCs - EPH by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) Ref-1	E601A	09-Aug-2024	16-Aug-2024	14 days	7 days	✓	16-Aug-2024	40 days	0 days	✓
Hydrocarbons : BC PHCs - EPH by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) TGT-Ref-1	E601A	09-Aug-2024	16-Aug-2024	14 days	7 days	✓	16-Aug-2024	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) DUP-F	E601	09-Aug-2024	16-Aug-2024	14 days	6 days	✓	16-Aug-2024	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) KLK-Ref-1	E601	09-Aug-2024	16-Aug-2024	14 days	7 days	✓	16-Aug-2024	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) Ref-1	E601	09-Aug-2024	16-Aug-2024	14 days	7 days	✓	16-Aug-2024	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) TGT-Ref-1	E601	09-Aug-2024	16-Aug-2024	14 days	7 days	✓	16-Aug-2024	40 days	0 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) DUP-F	E581.VH+F1	09-Aug-2024	17-Aug-2024	14 days	7 days	✓	17-Aug-2024	14 days	8 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method	Method	Sampling Date	Extraction / Preparation				Analysis			
Container / Client Sample ID(s)			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) TGT-Ref-1	E581.VH+F1	09-Aug-2024	17-Aug-2024	14 days	7 days	✓	17-Aug-2024	14 days	8 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) KLK-Ref-1	E581.VH+F1	09-Aug-2024	17-Aug-2024	14 days	8 days	✓	17-Aug-2024	14 days	8 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) Ref-1	E581.VH+F1	09-Aug-2024	17-Aug-2024	14 days	8 days	✓	17-Aug-2024	14 days	8 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) DUP-F	E358-L	09-Aug-2024	16-Aug-2024	28 days	6 days	✓	16-Aug-2024	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) TGT-Ref-1	E358-L	09-Aug-2024	16-Aug-2024	28 days	6 days	✓	16-Aug-2024	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) KLK-Ref-1	E358-L	09-Aug-2024	16-Aug-2024	28 days	7 days	✓	16-Aug-2024	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) Ref-1	E358-L	09-Aug-2024	16-Aug-2024	28 days	7 days	✓	16-Aug-2024	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) DUP-F	E355-L	09-Aug-2024	15-Aug-2024	28 days	6 days	✓	16-Aug-2024	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) TGT-Ref-1	E355-L	09-Aug-2024	15-Aug-2024	28 days	6 days	✓	16-Aug-2024	28 days	7 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) KLK-Ref-1	E355-L	09-Aug-2024	15-Aug-2024	28 days	7 days	✓	16-Aug-2024	28 days	7 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) Ref-1	E355-L	09-Aug-2024	15-Aug-2024	28 days	7 days	✓	16-Aug-2024	28 days	7 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE DUP-F	E290	09-Aug-2024	16-Aug-2024	14 days	7 days	✓	16-Aug-2024	14 days	7 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE KLK-Ref-1	E290	09-Aug-2024	16-Aug-2024	14 days	7 days	✓	16-Aug-2024	14 days	7 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE Ref-1	E290	09-Aug-2024	16-Aug-2024	14 days	7 days	✓	16-Aug-2024	14 days	7 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE TGT-Ref-1	E290	09-Aug-2024	16-Aug-2024	14 days	7 days	✓	16-Aug-2024	14 days	7 days	✓
Physical Tests : Conductivity in Seawater										
HDPE DUP-F	E100S	09-Aug-2024	16-Aug-2024	28 days	7 days	✓	16-Aug-2024	28 days	7 days	✓
Physical Tests : Conductivity in Seawater										
HDPE KLK-Ref-1	E100S	09-Aug-2024	16-Aug-2024	28 days	7 days	✓	16-Aug-2024	28 days	7 days	✓
Physical Tests : Conductivity in Seawater										
HDPE Ref-1	E100S	09-Aug-2024	16-Aug-2024	28 days	7 days	✓	16-Aug-2024	28 days	7 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : Conductivity in Seawater										
HDPE TGT-Ref-1	E100S	09-Aug-2024	16-Aug-2024	28 days	7 days	✓	16-Aug-2024	28 days	7 days	✓
Physical Tests : pH by Meter										
HDPE DUP-F	E108	09-Aug-2024	16-Aug-2024	0.25 hrs	161 hrs	✗ EHTR-FM	16-Aug-2024	0.25 hrs	164 hrs	✗ EHTR-FM
Physical Tests : pH by Meter										
HDPE TGT-Ref-1	E108	09-Aug-2024	16-Aug-2024	0.25 hrs	163 hrs	✗ EHTR-FM	16-Aug-2024	0.25 hrs	166 hrs	✗ EHTR-FM
Physical Tests : pH by Meter										
HDPE KLK-Ref-1	E108	09-Aug-2024	16-Aug-2024	0.25 hrs	166 hrs	✗ EHTR-FM	16-Aug-2024	0.25 hrs	169 hrs	✗ EHTR-FM
Physical Tests : pH by Meter										
HDPE Ref-1	E108	09-Aug-2024	16-Aug-2024	0.25 hrs	166 hrs	✗ EHTR-FM	16-Aug-2024	0.25 hrs	169 hrs	✗ EHTR-FM
Physical Tests : TDS by Gravimetry (Seawater)										
HDPE DUP-F	E162S	09-Aug-2024	----	----	----		16-Aug-2024	7 days	7 days	✓
Physical Tests : TDS by Gravimetry (Seawater)										
HDPE KLK-Ref-1	E162S	09-Aug-2024	----	----	----		16-Aug-2024	7 days	7 days	✓
Physical Tests : TDS by Gravimetry (Seawater)										
HDPE Ref-1	E162S	09-Aug-2024	----	----	----		16-Aug-2024	7 days	7 days	✓
Physical Tests : TDS by Gravimetry (Seawater)										
HDPE TGT-Ref-1	E162S	09-Aug-2024	----	----	----		16-Aug-2024	7 days	7 days	✓





Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method	Method	Sampling Date	Extraction / Preparation				Analysis			
Container / Client Sample ID(s)			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : TSS by Gravimetry (Seawater)										
HDPE DUP-F	E160S	09-Aug-2024	----	----	----		16-Aug-2024	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Seawater)										
HDPE KLK-Ref-1	E160S	09-Aug-2024	----	----	----		16-Aug-2024	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Seawater)										
HDPE Ref-1	E160S	09-Aug-2024	----	----	----		16-Aug-2024	7 days	7 days	✓
Physical Tests : TSS by Gravimetry (Seawater)										
HDPE TGT-Ref-1	E160S	09-Aug-2024	----	----	----		16-Aug-2024	7 days	7 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE DUP-F	E121	09-Aug-2024	----	----	----		15-Aug-2024	3 days	6 days	✖ EHTL
Physical Tests : Turbidity by Nephelometry										
HDPE KLK-Ref-1	E121	09-Aug-2024	----	----	----		15-Aug-2024	3 days	6 days	✖ EHTL
Physical Tests : Turbidity by Nephelometry										
HDPE Ref-1	E121	09-Aug-2024	----	----	----		15-Aug-2024	3 days	6 days	✖ EHTL
Physical Tests : Turbidity by Nephelometry										
HDPE TGT-Ref-1	E121	09-Aug-2024	----	----	----		15-Aug-2024	3 days	6 days	✖ EHTL
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) DUP-F	E641A	09-Aug-2024	16-Aug-2024	14 days	6 days	✓	16-Aug-2024	40 days	0 days	✓

Page : 14 of 24  
 Work Order : YL2401157  
 Client : WSP Canada Inc.  
 Project : CA0026317.6821/86000/03



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method	Method	Sampling Date	Extraction / Preparation				Analysis			
Container / Client Sample ID(s)			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) KLK-Ref-1	E641A	09-Aug-2024	16-Aug-2024	14 days	7 days	✓	16-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) Ref-1	E641A	09-Aug-2024	16-Aug-2024	14 days	7 days	✓	16-Aug-2024	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) TGT-Ref-1	E641A	09-Aug-2024	16-Aug-2024	14 days	7 days	✓	16-Aug-2024	40 days	0 days	✓
Total Metals : Total Mercury in Seawater by CVAAS										
Glass vial total (hydrochloric acid) DUP-F	E508S	09-Aug-2024	16-Aug-2024	28 days	7 days	✓	16-Aug-2024	28 days	7 days	✓
Total Metals : Total Mercury in Seawater by CVAAS										
Glass vial total (hydrochloric acid) KLK-Ref-1	E508S	09-Aug-2024	16-Aug-2024	28 days	7 days	✓	16-Aug-2024	28 days	7 days	✓
Total Metals : Total Mercury in Seawater by CVAAS										
Glass vial total (hydrochloric acid) Ref-1	E508S	09-Aug-2024	16-Aug-2024	28 days	7 days	✓	16-Aug-2024	28 days	7 days	✓
Total Metals : Total Mercury in Seawater by CVAAS										
Glass vial total (hydrochloric acid) TGT-Ref-1	E508S	09-Aug-2024	16-Aug-2024	28 days	7 days	✓	16-Aug-2024	28 days	7 days	✓
Total Metals : Total Metals in Seawater by Triple Quad ICPMS										
HDPE total (nitric acid) DUP-F	E466S	09-Aug-2024	16-Aug-2024	180 days	7 days	✓	18-Aug-2024	180 days	9 days	✓
Total Metals : Total Metals in Seawater by Triple Quad ICPMS										
HDPE total (nitric acid) KLK-Ref-1	E466S	09-Aug-2024	16-Aug-2024	180 days	7 days	✓	18-Aug-2024	180 days	9 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method	Method	Sampling Date	Extraction / Preparation				Analysis			
Container / Client Sample ID(s)			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Total Metals : Total Metals in Seawater by Triple Quad ICPMS										
HDPE total (nitric acid) Ref-1	E466S	09-Aug-2024	16-Aug-2024	180 days	7 days	✓	18-Aug-2024	180 days	9 days	✓
Total Metals : Total Metals in Seawater by Triple Quad ICPMS										
HDPE total (nitric acid) TGT-Ref-1	E466S	09-Aug-2024	16-Aug-2024	180 days	7 days	✓	18-Aug-2024	180 days	9 days	✓
Total Metals : Total Sodium and Silicon in Seawater by CRC ICPMS										
HDPE total (nitric acid) DUP-F	E468S.NaSi	09-Aug-2024	16-Aug-2024	180 days	7 days	✓	18-Aug-2024	180 days	9 days	✓
Total Metals : Total Sodium and Silicon in Seawater by CRC ICPMS										
HDPE total (nitric acid) KLK-Ref-1	E468S.NaSi	09-Aug-2024	16-Aug-2024	180 days	7 days	✓	18-Aug-2024	180 days	9 days	✓
Total Metals : Total Sodium and Silicon in Seawater by CRC ICPMS										
HDPE total (nitric acid) Ref-1	E468S.NaSi	09-Aug-2024	16-Aug-2024	180 days	7 days	✓	18-Aug-2024	180 days	9 days	✓
Total Metals : Total Sodium and Silicon in Seawater by CRC ICPMS										
HDPE total (nitric acid) TGT-Ref-1	E468S.NaSi	09-Aug-2024	16-Aug-2024	180 days	7 days	✓	18-Aug-2024	180 days	9 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate) DUP-F	E611A	09-Aug-2024	17-Aug-2024	14 days	7 days	✓	17-Aug-2024	14 days	8 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate) TGT-Ref-1	E611A	09-Aug-2024	17-Aug-2024	14 days	7 days	✓	17-Aug-2024	14 days	8 days	✓
Volatile Organic Compounds : BTEX by Headspace GC-MS										
Glass vial (sodium bisulfate) KLK-Ref-1	E611A	09-Aug-2024	17-Aug-2024	14 days	8 days	✓	17-Aug-2024	14 days	8 days	✓

Page : 16 of 24  
 Work Order : YL2401157  
 Client : WSP Canada Inc.  
 Project : CA0026317.6821/86000/03



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method		Method	Sampling Date	Extraction / Preparation			Analysis				
Container / Client Sample ID(s)				Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
					Rec	Actual			Rec	Actual	
Volatile Organic Compounds : BTEX by Headspace GC-MS											
Glass vial (sodium bisulfate) Ref-1		E611A	09-Aug-2024	17-Aug-2024	14 days	8 days	✔	17-Aug-2024	14 days	8 days	✔

#### Legend & Qualifier Definitions

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended

EHTL: Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.

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



## Quality Control Parameter Frequency Compliance

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

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Laboratory Duplicates (DUP)							
Alkalinity Species by Titration	E290	1599354	1	6	16.6	5.0	✔
Ammonia by Fluorescence	E298	1598937	1	15	6.6	5.0	✔
Bromide in Seawater by IC	E235S.Br	1599363	1	4	25.0	5.0	✔
BTEX by Headspace GC-MS	E611A	1601328	1	20	5.0	5.0	✔
Chloride in Seawater by IC	E235S.Cl	1599361	1	6	16.6	5.0	✔
Conductivity in Seawater	E100S	1599353	1	20	5.0	5.0	✔
Dissolved Mercury in Seawater by CVAAS	E509S	1605820	1	4	25.0	5.0	✔
Dissolved Metals in Seawater by Triple Quad ICPMS	E465S	1599614	1	6	16.6	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1598934	1	4	25.0	5.0	✔
Dissolved Sodium and Silicon in Seawater by CRC ICPMS	E469S.NaSi	1599611	1	6	16.6	5.0	✔
Fluoride in Seawater by IC (Low Level)	E235S.F-L	1599364	1	4	25.0	5.0	✔
Nitrate in Seawater by IC (Trace Level)	E235S.NO3-T	1599358	1	6	16.6	5.0	✔
Nitrite in Seawater by IC (Low Level)	E235S.NO2-L	1599359	1	6	16.6	5.0	✔
pH by Meter	E108	1599355	1	20	5.0	5.0	✔
Sulfate in Seawater by IC (Low Level)	E235S.SO4-L	1599365	1	4	25.0	5.0	✔
TDS by Gravimetry (Seawater)	E162S	1601040	1	4	25.0	5.0	✔
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	1598936	1	15	6.6	5.0	✔
Total Kjeldahl Nitrogen in Seawater by Fluorescence	E318S	1598938	1	4	25.0	5.0	✔
Total Mercury in Seawater by CVAAS	E508S	1601043	1	11	9.0	5.0	✔
Total Metals in Seawater by Triple Quad ICPMS	E466S	1599646	1	20	5.0	5.0	✔
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	1598935	1	4	25.0	5.0	✔
Total Phosphorus in Seawater by Colourimetry (0.002 mg/L)	E372S	1598939	1	15	6.6	5.0	✔
Total Sodium and Silicon in Seawater by CRC ICPMS	E468S.NaSi	1599644	1	20	5.0	5.0	✔
Turbidity by Nephelometry	E121	1598383	1	14	7.1	5.0	✔
VH and F1 by Headspace GC-FID	E581.VH+F1	1601327	1	20	5.0	5.0	✔
Laboratory Control Samples (LCS)							
Alkalinity Species by Titration	E290	1599354	1	6	16.6	5.0	✔
Ammonia by Fluorescence	E298	1598937	1	15	6.6	5.0	✔
BC PHCs - EPH by GC-FID	E601A	1599079	1	19	5.2	5.0	✔
Bromide in Seawater by IC	E235S.Br	1599363	1	4	25.0	5.0	✔
BTEX by Headspace GC-MS	E611A	1601328	1	20	5.0	5.0	✔
CCME PHCs - F2-F4 by GC-FID	E601	1599081	1	4	25.0	5.0	✔
Chloride in Seawater by IC	E235S.Cl	1599361	1	6	16.6	5.0	✔
Conductivity in Seawater	E100S	1599353	1	20	5.0	5.0	✔
Dissolved Mercury in Seawater by CVAAS	E509S	1605820	1	4	25.0	5.0	✔
Dissolved Metals in Seawater by Triple Quad ICPMS	E465S	1599614	1	6	16.6	5.0	✔



Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
<b>Laboratory Control Samples (LCS) - Continued</b>							
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1598934	1	4	25.0	5.0	✔
Dissolved Sodium and Silicon in Seawater by CRC ICPMS	E469S.NaSi	1599611	1	6	16.6	5.0	✔
Fluoride in Seawater by IC (Low Level)	E235S.F-L	1599364	1	4	25.0	5.0	✔
Nitrate in Seawater by IC (Trace Level)	E235S.NO3-T	1599358	1	6	16.6	5.0	✔
Nitrite in Seawater by IC (Low Level)	E235S.NO2-L	1599359	1	6	16.6	5.0	✔
PAHs in Water by Hexane LVI GC-MS	E641A	1599080	1	10	10.0	5.0	✔
pH by Meter	E108	1599355	1	20	5.0	5.0	✔
Sulfate in Seawater by IC (Low Level)	E235S.SO4-L	1599365	1	4	25.0	5.0	✔
TDS by Gravimetry (Seawater)	E162S	1601040	1	4	25.0	5.0	✔
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	1598936	1	15	6.6	5.0	✔
Total Kjeldahl Nitrogen in Seawater by Fluorescence	E318S	1598938	1	4	25.0	5.0	✔
Total Mercury in Seawater by CVAAS	E508S	1601043	1	11	9.0	5.0	✔
Total Metals in Seawater by Triple Quad ICPMS	E466S	1599646	1	20	5.0	5.0	✔
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	1598935	1	4	25.0	5.0	✔
Total Phosphorus in Seawater by Colourimetry (0.002 mg/L)	E372S	1598939	1	15	6.6	5.0	✔
Total Sodium and Silicon in Seawater by CRC ICPMS	E468S.NaSi	1599644	1	20	5.0	5.0	✔
TSS by Gravimetry (Seawater)	E160S	1601038	1	4	25.0	5.0	✔
Turbidity by Nephelometry	E121	1598383	1	14	7.1	5.0	✔
VH and F1 by Headspace GC-FID	E581.VH+F1	1601327	1	20	5.0	5.0	✔
<b>Method Blanks (MB)</b>							
Alkalinity Species by Titration	E290	1599354	1	6	16.6	5.0	✔
Ammonia by Fluorescence	E298	1598937	1	15	6.6	5.0	✔
BC PHCs - EPH by GC-FID	E601A	1599079	1	19	5.2	5.0	✔
Bromide in Seawater by IC	E235S.Br	1599363	1	4	25.0	5.0	✔
BTEX by Headspace GC-MS	E611A	1601328	1	20	5.0	5.0	✔
CCME PHCs - F2-F4 by GC-FID	E601	1599081	1	4	25.0	5.0	✔
Chloride in Seawater by IC	E235S.Cl	1599361	1	6	16.6	5.0	✔
Conductivity in Seawater	E100S	1599353	1	20	5.0	5.0	✔
Dissolved Mercury in Seawater by CVAAS	E509S	1605820	1	4	25.0	5.0	✔
Dissolved Metals in Seawater by Triple Quad ICPMS	E465S	1599614	1	6	16.6	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1598934	1	4	25.0	5.0	✔
Dissolved Sodium and Silicon in Seawater by CRC ICPMS	E469S.NaSi	1599611	1	6	16.6	5.0	✔
Fluoride in Seawater by IC (Low Level)	E235S.F-L	1599364	1	4	25.0	5.0	✔
Nitrate in Seawater by IC (Trace Level)	E235S.NO3-T	1599358	1	6	16.6	5.0	✔
Nitrite in Seawater by IC (Low Level)	E235S.NO2-L	1599359	1	6	16.6	5.0	✔
PAHs in Water by Hexane LVI GC-MS	E641A	1599080	1	10	10.0	5.0	✔
Sulfate in Seawater by IC (Low Level)	E235S.SO4-L	1599365	1	4	25.0	5.0	✔
TDS by Gravimetry (Seawater)	E162S	1601040	1	4	25.0	5.0	✔
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	1598936	1	15	6.6	5.0	✔



Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
<b>Method Blanks (MB) - Continued</b>							
Total Kjeldahl Nitrogen in Seawater by Fluorescence	E318S	1598938	1	4	25.0	5.0	✔
Total Mercury in Seawater by CVAAS	E508S	1601043	1	11	9.0	5.0	✔
Total Metals in Seawater by Triple Quad ICPMS	E466S	1599646	1	20	5.0	5.0	✔
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	1598935	1	4	25.0	5.0	✔
Total Phosphorus in Seawater by Colourimetry (0.002 mg/L)	E372S	1598939	1	15	6.6	5.0	✔
Total Sodium and Silicon in Seawater by CRC ICPMS	E468S.NaSi	1599644	1	20	5.0	5.0	✔
TSS by Gravimetry (Seawater)	E160S	1601038	1	4	25.0	5.0	✔
Turbidity by Nephelometry	E121	1598383	1	14	7.1	5.0	✔
VH and F1 by Headspace GC-FID	E581.VH+F1	1601327	1	20	5.0	5.0	✔
<b>Matrix Spikes (MS)</b>							
Ammonia by Fluorescence	E298	1598937	1	15	6.6	5.0	✔
Bromide in Seawater by IC	E235S.Br	1599363	1	4	25.0	5.0	✔
BTEX by Headspace GC-MS	E611A	1601328	1	20	5.0	5.0	✔
Chloride in Seawater by IC	E235S.Cl	1599361	1	6	16.6	5.0	✔
Dissolved Mercury in Seawater by CVAAS	E509S	1605820	1	4	25.0	5.0	✔
Dissolved Metals in Seawater by Triple Quad ICPMS	E465S	1599614	1	6	16.6	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1598934	1	4	25.0	5.0	✔
Dissolved Sodium and Silicon in Seawater by CRC ICPMS	E469S.NaSi	1599611	1	6	16.6	5.0	✔
Fluoride in Seawater by IC (Low Level)	E235S.F-L	1599364	1	4	25.0	5.0	✔
Nitrate in Seawater by IC (Trace Level)	E235S.NO3-T	1599358	1	6	16.6	5.0	✔
Nitrite in Seawater by IC (Low Level)	E235S.NO2-L	1599359	1	6	16.6	5.0	✔
Sulfate in Seawater by IC (Low Level)	E235S.SO4-L	1599365	1	4	25.0	5.0	✔
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	1598936	1	15	6.6	5.0	✔
Total Kjeldahl Nitrogen in Seawater by Fluorescence	E318S	1598938	1	4	25.0	5.0	✔
Total Mercury in Seawater by CVAAS	E508S	1601043	1	11	9.0	5.0	✔
Total Metals in Seawater by Triple Quad ICPMS	E466S	1599646	1	20	5.0	5.0	✔
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	1598935	1	4	25.0	5.0	✔
Total Phosphorus in Seawater by Colourimetry (0.002 mg/L)	E372S	1598939	1	15	6.6	5.0	✔
Total Sodium and Silicon in Seawater by CRC ICPMS	E468S.NaSi	1599644	1	20	5.0	5.0	✔
VH and F1 by Headspace GC-FID	E581.VH+F1	1601327	1	20	5.0	5.0	✔



## Methodology References and Summaries

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

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Conductivity in Seawater	E100S ALS Environmental - Vancouver	Water	APHA 2510 (mod)	Conductivity, also known as Electrical Conductivity (EC) or Specific Conductance, is measured by immersion of a conductivity cell with platinum electrodes into a seawater sample. Conductivity measurements are temperature-compensated to 25°C. Salinity in Practical Salinity Units is calculated.
pH by Meter	E108 ALS Environmental - Vancouver	Water	APHA 4500-H (mod)	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 ± 5°C). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.
Turbidity by Nephelometry	E121 ALS Environmental - Vancouver	Water	APHA 2130 B (mod)	Turbidity is measured by the nephelometric method, by measuring the intensity of light scatter under defined conditions.
TSS by Gravimetry (Seawater)	E160S ALS Environmental - Vancouver	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at 104 ± 1°C, with gravimetric measurement of the filtered solids.
TDS by Gravimetry (Seawater)	E162S ALS Environmental - Vancouver	Water	APHA 2540 C (mod)	Total Dissolved Solids (TDS) are determined by filtering a sample through a glass fibre filter, with evaporation of the filtrate at 180 ± 2°C for 16 hours or to constant weight, with gravimetric measurement of the residue.
Bromide in Seawater by IC	E235S.Br ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Chloride in Seawater by IC	E235S.Cl ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Fluoride in Seawater by IC (Low Level)	E235S.F-L ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrite in Seawater by IC (Low Level)	E235S.NO2-L ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrate in Seawater by IC (Trace Level)	E235S.NO3-T ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.





Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Sulfate in Seawater by IC (Low Level)	E235S.SO4-L  ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Alkalinity Species by Titration	E290  ALS Environmental - Vancouver	Water	APHA 2320 B (mod)	Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.
Ammonia by Fluorescence	E298  ALS Environmental - Vancouver	Water	Method Fialab 100, 2018	Ammonia in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021)
Total Kjeldahl Nitrogen in Seawater by Fluorescence	E318S  ALS Environmental - Vancouver	Water	Method Fialab 100, 2018	TKN in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021)
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L  ALS Environmental - Vancouver	Water	APHA 5310 B (mod)	Total Organic Carbon (Non-Purgeable), also known as NPOC (total), is a direct measurement of TOC after an acidified sample has been purged to remove inorganic carbon (IC). Analysis is by high temperature combustion with infrared detection of CO <sub>2</sub> . NPOC does not include volatile organic species that are purged off with IC. For samples where the majority of total carbon (TC) is comprised of IC (which is common), this method is more accurate and more reliable than the TOC by subtraction method (i.e. TC minus TIC).
Dissolved Organic Carbon by Combustion (Low Level)	E358-L  ALS Environmental - Vancouver	Water	APHA 5310 B (mod)	Dissolved Organic Carbon (Non-Purgeable), also known as NPOC (dissolved), is a direct measurement of DOC after a filtered (0.45 micron) sample has been acidified and purged to remove inorganic carbon (IC). Analysis is by high temperature combustion with infrared detection of CO <sub>2</sub> . NPOC does not include volatile organic species that are purged off with IC. For samples where the majority of DC (dissolved carbon) is comprised of IC (which is common), this method is more accurate and more reliable than the DOC by subtraction method (i.e. DC minus DIC).
Total Phosphorus in Seawater by Colourimetry (0.002 mg/L)	E372S  ALS Environmental - Vancouver	Water	APHA 4500-P E (mod).	Total Phosphorus is determined colourimetrically using a discrete analyzer after heated persulfate digestion of the sample.
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T  ALS Environmental - Vancouver	Water	APHA 4500-P E (mod).	Total Dissolved Phosphorus is determined colourimetrically using a discrete analyzer after filtration through a 0.45 micron filter followed by heated persulfate digestion of the sample.
Dissolved Metals in Seawater by Triple Quad ICPMS	E465S  ALS Environmental - Vancouver	Water	APHA 3030B/EPA 6020B (mod)	Seawater samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Triple Quadrupole ICPMS.



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Total Metals in Seawater by Triple Quad ICPMS	E466S ALS Environmental - Vancouver	Water	EPA 200.2/6020B (mod)	Seawater samples are digested with nitric and hydrochloric acids, and analyzed by Triple Quadrupole ICPMS. This method is compliant with digestion requirements of the British Columbia Environmental Laboratory Manual.
Total Sodium and Silicon in Seawater by CRC ICPMS	E468S.NaSi ALS Environmental - Vancouver	Water	EPA 200.2/6020B (mod)	Seawater samples are digested with nitric and hydrochloric acids, and analyzed by Collision/Reaction Cell ICPMS. This method is compliant with digestion requirements of the British Columbia Environmental Laboratory Manual.
Dissolved Sodium and Silicon in Seawater by CRC ICPMS	E469S.NaSi ALS Environmental - Vancouver	Water	APHA 3030B/EPA 6020B (mod)	Seawater samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS.
Total Mercury in Seawater by CVAAS	E508S ALS Environmental - Vancouver	Water	EPA 1631E (mod)	Seawater samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.
Dissolved Mercury in Seawater by CVAAS	E509S ALS Environmental - Vancouver	Water	APHA 3030B/EPA 1631E (mod)	Seawater samples are filtered (0.45 um), preserved with HCl, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.
VH and F1 by Headspace GC-FID	E581.VH+F1 ALS Environmental - Vancouver	Water	BC MOE Lab Manual / CCME PHC in Soil - Tier 1 (mod)	<p>Volatile Hydrocarbons (VH and F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.</p> <p>Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.</p>
CCME PHCs - F2-F4 by GC-FID	E601 ALS Environmental - Vancouver	Water	CCME PHC in Soil - Tier 1	<p>Sample extracts are analyzed by GC-FID for CCME hydrocarbon fractions (F2-F4).</p> <p>Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.</p>
BC PHCs - EPH by GC-FID	E601A ALS Environmental - Vancouver	Water	BC MOE Lab Manual	Sample extracts are analyzed by GC-FID for BC hydrocarbon fractions.
BTEX by Headspace GC-MS	E611A ALS Environmental - Vancouver	Water	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
PAHs in Water by Hexane LVI GC-MS	E641A ALS Environmental - Vancouver	Water	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large volume injection (LVI) GC-MS.
Dissolved Hardness (Calculated)	EC100 ALS Environmental - Vancouver	Water	APHA 2340B	"Hardness (as CaCO <sub>3</sub> ), dissolved" is calculated from the sum of dissolved Calcium and Magnesium concentrations, expressed in CaCO <sub>3</sub> equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations.
Hardness (Calculated) from Total Ca/Mg	EC100A ALS Environmental - Vancouver	Water	APHA 2340B	"Hardness (as CaCO <sub>3</sub> ), from total Ca/Mg" is calculated from the sum of total Calcium and Magnesium concentrations, expressed in CaCO <sub>3</sub> equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations. Hardness from total Ca/Mg is normally comparable to Dissolved Hardness in non-turbid waters.
Salinity in Water (calculation)	EC100S ALS Environmental - Vancouver	Water	APHA 2510 (mod)	Conductivity, also known as Electrical Conductivity (EC) or Specific Conductance, is measured by immersion of a conductivity cell with platinum electrodes into a seawater sample. Conductivity measurements are temperature-compensated to 25°C. Salinity in Practical Salinity Units is calculated.
F1-BTEX	EC580 ALS Environmental - Vancouver	Water	CCME PHC in Soil - Tier 1	F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).
VPH: VH-BTEX-Styrene	EC580A ALS Environmental - Vancouver	Water	BC MOE Lab Manual (VPH in Water and Solids) (mod)	Volatile Petroleum Hydrocarbons (VPH) is calculated as follows: VPHw = Volatile Hydrocarbons (VH C6-C10) minus benzene, toluene, ethylbenzene, xylenes (BTEX) and styrene.
LEPH and HEPH: EPH-PAH	EC600A ALS Environmental - Vancouver	Water	BC MOE Lab Manual (LEPH and HEPH)	Light Extractable Petroleum Hydrocarbons (LEPH) and Heavy Extractable Petroleum Hydrocarbons (HEPH) are calculated as follows: LEPH = Extractable Petroleum Hydrocarbons (EPH10-19) minus Acenaphthene, Acridine, Anthracene, Fluorene, Naphthalene and Phenanthrene; HEPH = Extractable Petroleum Hydrocarbons (EPH19-32) minus Benz(a)anthracene, Benzo(a)pyrene, Fluoranthene, and Pyrene.
Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Ammonia	EP298 ALS Environmental - Vancouver	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Digestion for TKN in Seawater	EP318S ALS Environmental - Vancouver	Water	APHA 4500-Norg D (mod)	Samples are digested at high temperature using Sulfuric Acid with Copper catalyst, which converts organic nitrogen sources to Ammonia, which is then quantified by the analytical method as TKN. This method is unsuitable for samples containing high levels of nitrate. If nitrate exceeds TKN concentration by ten times or more, results may be biased low.



Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Total Organic Carbon by Combustion	EP355 ALS Environmental - Vancouver	Water		Preparation for Total Organic Carbon by Combustion
Preparation for Dissolved Organic Carbon for Combustion	EP358 ALS Environmental - Vancouver	Water	APHA 5310 B (mod)	Preparation for Dissolved Organic Carbon
Digestion for Total Phosphorus in water	EP372 ALS Environmental - Vancouver	Water	APHA 4500-P E (mod).	Samples are heated with a persulfate digestion reagent.
Digestion for Dissolved Phosphorus in water	EP375 ALS Environmental - Vancouver	Water	APHA 4500-P E (mod).	Samples are filtered through a 0.45 micron membrane filter and then heated with a persulfate digestion reagent.
Dissolved Metals Water Filtration	EP421 ALS Environmental - Vancouver	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO <sub>3</sub> .
Dissolved Metals Seawater Filtration	EP421S ALS Environmental - Vancouver	Water	PUGET SOUND PROTOCOLS, EPA 6020A	This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis is by Collision/Reaction Cell ICPMS.
Dissolved Mercury Water Filtration	EP509 ALS Environmental - Vancouver	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HCl.
VOCs Preparation for Headspace Analysis	EP581 ALS Environmental - Vancouver	Water	EPA 5021A (mod)	Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler. An aliquot of the headspace is then injected into the GC/MS-FID system.
PHCs and PAHs Hexane Extraction	EP601 ALS Environmental - Vancouver	Water	EPA 3511 (mod)	Petroleum Hydrocarbons (PHCs) and Polycyclic Aromatic Hydrocarbons (PAHs) are extracted using a hexane liquid-liquid extraction.

QUALITY CONTROL REPORT

Work Order	: YL2401157	Page	: 1 of 21
Client	: WSP Canada Inc.	Laboratory	: ALS Environmental - Yellowknife
Contact	: Connor Pettem	Account Manager	: Amber Springer
Address	: 840 Howe St, 10th Floor Vancouver BC Canada V6Z 2S9	Address	: 314 Old Airport Road, Unit 116 Yellowknife, Northwest Territories Canada X1A 3T3
Telephone	: ----	Telephone	: +1 867 873 5593
Project	: CA0026317.6821/86000/03	Date Samples Received	: 12-Aug-2024 11:24
PO	: ----	Date Analysis Commenced	: 15-Aug-2024
C-O-C number	: ----	Issue Date	: 23-Aug-2024 13:12
Sampler	: TT/MR/DV		
Site	: Baffinland Milne Port		
Quote number	: VA24-GOLD100-011		
No. of samples received	: 4		
No. of samples analysed	: 4		

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	Position	Laboratory Department
Angelo Salandanan	Lab Assistant	Vancouver Metals, Burnaby, British Columbia
Dan Gebert	Laboratory Analyst	Vancouver Metals, Burnaby, British Columbia
Janice Leung	Supervisor - Organics Instrumentation	Vancouver Organics, Burnaby, British Columbia
Maya Urquhart	Lab Analyst	Vancouver Metals, Burnaby, British Columbia
Monica Ko	Lab Assistant	Vancouver Inorganics, Burnaby, British Columbia
Robin Weeks	Team Leader - Metals	Vancouver Metals, Burnaby, British Columbia
Tracy Harley	Supervisor - Water Quality Instrumentation	Vancouver Inorganics, Burnaby, British Columbia



---

## General Comments

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

### Key :

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

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

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

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

## Workorder Comments

---

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

---



Laboratory Duplicate (DUP) Report

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

Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 1598383)											
VA24C0512-003	Anonymous	Turbidity	----	E121	0.10	NTU	0.33	0.34	0.008	Diff <2x LOR	----
Physical Tests (QC Lot: 1599353)											
VA24C0462-003	Anonymous	Conductivity	----	E100S	2.0	µS/cm	10200	9930	2.19%	20%	----
Physical Tests (QC Lot: 1599354)											
VA24C0462-003	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	37.4	37.2	0.536%	20%	----
Physical Tests (QC Lot: 1599355)											
VA24C0462-003	Anonymous	pH	----	E108	0.10	pH units	9.18	9.05	1.43%	4%	----
Physical Tests (QC Lot: 1601040)											
YL2401157-001	Ref-1	Solids, total dissolved [TDS]	----	E162S	10	mg/L	<10	<10	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1598936)											
VA24C0463-005	Anonymous	Phosphorus, total dissolved	7723-14-0	E375-T	0.0020	mg/L	0.0349	0.0339	2.97%	20%	----
Anions and Nutrients (QC Lot: 1598937)											
VA24C0463-005	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.0050	<0.0050	0.00002	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1598938)											
YL2401157-001	Ref-1	Kjeldahl nitrogen, total [TKN]	----	E318S	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1598939)											
VA24C0463-005	Anonymous	Phosphorus, total	7723-14-0	E372S	0.0020	mg/L	0.0346	0.0342	1.25%	20%	----
Anions and Nutrients (QC Lot: 1599358)											
VA24C0462-003	Anonymous	Nitrate (as N)	14797-55-8	E235S.NO3-T	0.010	mg/L	<0.010	0.011	0.0010	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1599359)											
VA24C0462-003	Anonymous	Nitrite (as N)	14797-65-0	E235S.NO2-L	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1599361)											
VA24C0462-003	Anonymous	Chloride	16887-00-6	E235S.Cl	50	mg/L	3100	3100	0.173%	20%	----
Anions and Nutrients (QC Lot: 1599363)											
YL2401157-001	Ref-1	Bromide	24959-67-9	E235S.Br	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1599364)											
YL2401157-001	Ref-1	Fluoride	16984-48-8	E235S.F-L	0.20	mg/L	<0.20	<0.20	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1599365)											
YL2401157-001	Ref-1	Sulfate (as SO4)	14808-79-8	E235S.SO4-L	3.0	mg/L	<3.0	<3.0	0	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 1598934)											



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Organic / Inorganic Carbon (QC Lot: 1598934) - continued											
YL2401157-001	Ref-1	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	<0.50	<0.50	0	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 1598935)											
YL2401157-001	Ref-1	Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	<0.50	<0.50	0	Diff <2x LOR	----
Total Metals (QC Lot: 1599644)											
VA24C0462-003	Anonymous	Silicon, total	7440-21-3	E468S.NaSi	1.0	mg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Sodium, total	7440-23-5	E468S.NaSi	2.5	mg/L	1640	1650	0.382%	20%	----
Total Metals (QC Lot: 1599646)											
VA24C0462-003	Anonymous	Aluminum, total	7429-90-5	E466S	0.0050	mg/L	0.0072	0.0072	0.00006	Diff <2x LOR	----
		Antimony, total	7440-36-0	E466S	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Arsenic, total	7440-38-2	E466S	0.00040	mg/L	0.00088	0.00083	0.00005	Diff <2x LOR	----
		Barium, total	7440-39-3	E466S	0.0010	mg/L	0.0183	0.0182	0.570%	20%	----
		Beryllium, total	7440-41-7	E466S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Bismuth, total	7440-69-9	E466S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Boron, total	7440-42-8	E466S	0.30	mg/L	0.77	0.80	0.03	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E466S	0.000020	mg/L	0.000357	0.000408	13.1%	20%	----
		Calcium, total	7440-70-2	E466S	1.0	mg/L	241	236	2.20%	20%	----
		Cesium, total	7440-46-2	E466S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Chromium, total	7440-47-3	E466S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, total	7440-48-4	E466S	0.000050	mg/L	0.000222	0.000214	0.000008	Diff <2x LOR	----
		Copper, total	7440-50-8	E466S	0.00050	mg/L	0.00315	0.00302	0.00013	Diff <2x LOR	----
		Gallium, total	7440-55-3	E466S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Iron, total	7439-89-6	E466S	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Lead, total	7439-92-1	E466S	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Lithium, total	7439-93-2	E466S	0.020	mg/L	0.029	0.028	0.0004	Diff <2x LOR	----
		Magnesium, total	7439-95-4	E466S	1.0	mg/L	220	216	1.98%	20%	----
		Manganese, total	7439-96-5	E466S	0.00020	mg/L	0.00107	0.00106	0.00001	Diff <2x LOR	----
		Molybdenum, total	7439-98-7	E466S	0.00010	mg/L	0.00338	0.00335	0.932%	20%	----
		Nickel, total	7440-02-0	E466S	0.00050	mg/L	0.00077	0.00073	0.00004	Diff <2x LOR	----
		Phosphorus, total	7723-14-0	E466S	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, total	7440-09-7	E466S	1.0	mg/L	51.3	50.5	1.73%	20%	----
		Rhenium, total	7440-15-5	E466S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Rubidium, total	7440-17-7	E466S	0.0050	mg/L	0.0123	0.0121	0.0002	Diff <2x LOR	----
		Selenium, total	7782-49-2	E466S	0.00050	mg/L	0.00090	0.00078	0.00012	Diff <2x LOR	----
		Silver, total	7440-22-4	E466S	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----





Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Total Metals (QC Lot: 1599646) - continued											
VA24C0462-003	Anonymous	Strontium, total	7440-24-6	E466S	0.010	mg/L	2.29	2.27	0.858%	20%	----
		Sulfur, total	7704-34-9	E466S	5.0	mg/L	292	295	1.01%	20%	----
		Tellurium, total	13494-80-9	E466S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Thallium, total	7440-28-0	E466S	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Thorium, total	7440-29-1	E466S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E466S	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E466S	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
		Tungsten, total	7440-33-7	E466S	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Uranium, total	7440-61-1	E466S	0.000050	mg/L	0.000563	0.000564	0.278%	20%	----
		Vanadium, total	7440-62-2	E466S	0.00050	mg/L	0.00127	0.00120	0.00006	Diff <2x LOR	----
		Yttrium, total	7440-65-5	E466S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, total	7440-66-6	E466S	0.0030	mg/L	0.0169	0.0164	0.0004	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E466S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
Total Metals (QC Lot: 1601043)											
VA24C0194-001	Anonymous	Mercury, total	7439-97-6	E508S	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1599611)											
VA24C0462-003	Anonymous	Silicon, dissolved	7440-21-3	E469S.NaSi	1.0	mg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E469S.NaSi	2.5	mg/L	1580	1540	2.56%	20%	----
Dissolved Metals (QC Lot: 1599614)											
VA24C0462-003	Anonymous	Aluminum, dissolved	7429-90-5	E465S	0.0050	mg/L	<0.0050	0.0051	0.0001	Diff <2x LOR	----
		Antimony, dissolved	7440-36-0	E465S	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E465S	0.00040	mg/L	0.00089	0.00081	0.00007	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E465S	0.0010	mg/L	0.0181	0.0185	1.90%	20%	----
		Beryllium, dissolved	7440-41-7	E465S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E465S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E465S	0.30	mg/L	0.84	0.88	0.04	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E465S	0.000020	mg/L	0.000229	0.000257	11.3%	20%	----
		Calcium, dissolved	7440-70-2	E465S	1.0	mg/L	238	238	0.0732%	20%	----
		Cesium, dissolved	7440-46-2	E465S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E465S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E465S	0.000050	mg/L	0.000186	0.000178	0.000008	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E465S	0.00050	mg/L	0.00269	0.00278	0.00010	Diff <2x LOR	----
		Gallium, dissolved	7440-55-3	E465S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Iron, dissolved	7439-89-6	E465S	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Dissolved Metals (QC Lot: 1599614) - continued											
VA24C0462-003	Anonymous	Lead, dissolved	7439-92-1	E465S	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E465S	0.020	mg/L	0.028	0.028	0.00008	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E465S	1.0	mg/L	219	221	1.13%	20%	----
		Manganese, dissolved	7439-96-5	E465S	0.00010	mg/L	0.00029	0.00027	0.00002	Diff <2x LOR	----
		Molybdenum, dissolved	7439-98-7	E465S	0.00010	mg/L	0.00306	0.00312	1.84%	20%	----
		Nickel, dissolved	7440-02-0	E465S	0.00050	mg/L	0.00055	0.00053	0.00002	Diff <2x LOR	----
		Phosphorus, dissolved	7723-14-0	E465S	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E465S	1.0	mg/L	50.4	51.4	1.83%	20%	----
		Rhenium, dissolved	7440-15-5	E465S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Rubidium, dissolved	7440-17-7	E465S	0.0050	mg/L	0.0118	0.0117	0.00003	Diff <2x LOR	----
		Selenium, dissolved	7782-49-2	E465S	0.00050	mg/L	0.00090	0.00095	0.00004	Diff <2x LOR	----
		Silver, dissolved	7440-22-4	E465S	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Strontium, dissolved	7440-24-6	E465S	0.010	mg/L	2.19	2.18	0.519%	20%	----
		Sulfur, dissolved	7704-34-9	E465S	5.0	mg/L	292	287	1.75%	20%	----
		Tellurium, dissolved	13494-80-9	E465S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E465S	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E465S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E465S	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E465S	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E465S	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E465S	0.000050	mg/L	0.000585	0.000601	2.68%	20%	----
		Vanadium, dissolved	7440-62-2	E465S	0.00050	mg/L	0.00124	0.00119	0.00004	Diff <2x LOR	----
		Yttrium, dissolved	7440-65-5	E465S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E465S	0.0010	mg/L	0.0100	0.0096	0.0004	Diff <2x LOR	----
		Zirconium, dissolved	7440-67-7	E465S	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1605820)											
YL2401157-001	Ref-1	Mercury, dissolved	7439-97-6	E509S	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Volatile Organic Compounds (QC Lot: 1601328)											
VA24C0791-001	Anonymous	Benzene	71-43-2	E611A	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611A	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A	0.50	µg/L	2.17	2.04	0.14	Diff <2x LOR	----
		Styrene	100-42-5	E611A	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Toluene	108-88-3	E611A	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611A	0.40	µg/L	0.72	0.67	0.05	Diff <2x LOR	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Volatile Organic Compounds (QC Lot: 1601328) - continued											
VA24C0791-001	Anonymous	Xylene, o-	95-47-6	E611A	0.30	µg/L	0.38	0.36	0.02	Diff <2x LOR	----
Hydrocarbons (QC Lot: 1601327)											
VA24C0791-001	Anonymous	F1 (C6-C10)	----	E581.VH+F1	100	µg/L	<100	<100	0.0%	30%	----
		VHw (C6-C10)	----	E581.VH+F1	100	µg/L	<100	<100	0.0%	30%	----



## Method Blank (MB) Report

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

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Physical Tests (QCLot: 1598383)</b>						
Turbidity	----	E121	0.1	NTU	<0.10	----
<b>Physical Tests (QCLot: 1599353)</b>						
Conductivity	----	E100S	2	µS/cm	<2.0	----
<b>Physical Tests (QCLot: 1599354)</b>						
Alkalinity, total (as CaCO <sub>3</sub> )	----	E290	1	mg/L	<1.0	----
<b>Physical Tests (QCLot: 1601038)</b>						
Solids, total suspended [TSS]	----	E160S	2	mg/L	<2.0	----
<b>Physical Tests (QCLot: 1601040)</b>						
Solids, total dissolved [TDS]	----	E162S	10	mg/L	<10	----
<b>Anions and Nutrients (QCLot: 1598936)</b>						
Phosphorus, total dissolved	7723-14-0	E375-T	0.002	mg/L	<0.0020	----
<b>Anions and Nutrients (QCLot: 1598937)</b>						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
<b>Anions and Nutrients (QCLot: 1598938)</b>						
Kjeldahl nitrogen, total [TKN]	----	E318S	0.05	mg/L	<0.050	----
<b>Anions and Nutrients (QCLot: 1598939)</b>						
Phosphorus, total	7723-14-0	E372S	0.002	mg/L	<0.0020	----
<b>Anions and Nutrients (QCLot: 1599358)</b>						
Nitrate (as N)	14797-55-8	E235S.NO3-T	0.01	mg/L	<0.010	----
<b>Anions and Nutrients (QCLot: 1599359)</b>						
Nitrite (as N)	14797-65-0	E235S.NO2-L	0.01	mg/L	<0.010	----
<b>Anions and Nutrients (QCLot: 1599361)</b>						
Chloride	16887-00-6	E235S.Cl	50	mg/L	<50	----
<b>Anions and Nutrients (QCLot: 1599363)</b>						
Bromide	24959-67-9	E235S.Br	5	mg/L	<5.0	----
<b>Anions and Nutrients (QCLot: 1599364)</b>						
Fluoride	16984-48-8	E235S.F-L	0.2	mg/L	<2.00	----
<b>Anions and Nutrients (QCLot: 1599365)</b>						
Sulfate (as SO <sub>4</sub> )	14808-79-8	E235S.SO4-L	3	mg/L	<30.0	----
<b>Organic / Inorganic Carbon (QCLot: 1598934)</b>						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
<b>Organic / Inorganic Carbon (QCLot: 1598935)</b>						



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Organic / Inorganic Carbon (QCLot: 1598935) - continued</b>						
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	<0.50	----
<b>Total Metals (QCLot: 1599644)</b>						
Silicon, total	7440-21-3	E468S.NaSi	1	mg/L	<1.0	----
Sodium, total	7440-23-5	E468S.NaSi	2.5	mg/L	<2.5	----
<b>Total Metals (QCLot: 1599646)</b>						
Aluminum, total	7429-90-5	E466S	0.005	mg/L	<0.0050	----
Antimony, total	7440-36-0	E466S	0.001	mg/L	<0.0010	----
Arsenic, total	7440-38-2	E466S	0.0004	mg/L	<0.00040	----
Barium, total	7440-39-3	E466S	0.001	mg/L	<0.0010	----
Beryllium, total	7440-41-7	E466S	0.0005	mg/L	<0.00050	----
Bismuth, total	7440-69-9	E466S	0.0005	mg/L	<0.00050	----
Boron, total	7440-42-8	E466S	0.3	mg/L	<0.30	----
Cadmium, total	7440-43-9	E466S	0.00002	mg/L	<0.000020	----
Calcium, total	7440-70-2	E466S	1	mg/L	<1.0	----
Cesium, total	7440-46-2	E466S	0.0005	mg/L	<0.00050	----
Chromium, total	7440-47-3	E466S	0.0005	mg/L	<0.00050	----
Cobalt, total	7440-48-4	E466S	0.00005	mg/L	<0.000050	----
Copper, total	7440-50-8	E466S	0.0005	mg/L	<0.00050	----
Gallium, total	7440-55-3	E466S	0.0005	mg/L	<0.00050	----
Iron, total	7439-89-6	E466S	0.01	mg/L	<0.010	----
Lead, total	7439-92-1	E466S	0.0001	mg/L	<0.00010	----
Lithium, total	7439-93-2	E466S	0.02	mg/L	<0.020	----
Magnesium, total	7439-95-4	E466S	1	mg/L	<1.0	----
Manganese, total	7439-96-5	E466S	0.0002	mg/L	<0.00020	----
Molybdenum, total	7439-98-7	E466S	0.0001	mg/L	<0.00010	----
Nickel, total	7440-02-0	E466S	0.0005	mg/L	<0.00050	----
Phosphorus, total	7723-14-0	E466S	0.05	mg/L	<0.050	----
Potassium, total	7440-09-7	E466S	1	mg/L	<1.0	----
Rhenium, total	7440-15-5	E466S	0.0005	mg/L	<0.00050	----
Rubidium, total	7440-17-7	E466S	0.005	mg/L	<0.0050	----
Selenium, total	7782-49-2	E466S	0.0005	mg/L	<0.00050	----
Silver, total	7440-22-4	E466S	0.0001	mg/L	<0.00010	----
Strontium, total	7440-24-6	E466S	0.01	mg/L	<0.010	----
Sulfur, total	7704-34-9	E466S	5	mg/L	<5.0	----
Tellurium, total	13494-80-9	E466S	0.0005	mg/L	<0.00050	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Total Metals (QCLot: 1599646) - continued</b>						
Thallium, total	7440-28-0	E466S	0.00005	mg/L	<0.000050	----
Thorium, total	7440-29-1	E466S	0.0005	mg/L	<0.00050	----
Tin, total	7440-31-5	E466S	0.001	mg/L	<0.0010	----
Titanium, total	7440-32-6	E466S	0.005	mg/L	<0.0050	----
Tungsten, total	7440-33-7	E466S	0.001	mg/L	<0.0010	----
Uranium, total	7440-61-1	E466S	0.00005	mg/L	<0.000050	----
Vanadium, total	7440-62-2	E466S	0.0005	mg/L	<0.00050	----
Yttrium, total	7440-65-5	E466S	0.0005	mg/L	<0.00050	----
Zinc, total	7440-66-6	E466S	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E466S	0.0005	mg/L	<0.00050	----
<b>Total Metals (QCLot: 1601043)</b>						
Mercury, total	7439-97-6	E508S	0.000005	mg/L	<0.0000050	----
<b>Dissolved Metals (QCLot: 1599611)</b>						
Silicon, dissolved	7440-21-3	E469S.NaSi	1	mg/L	<1.0	----
Sodium, dissolved	7440-23-5	E469S.NaSi	2.5	mg/L	<2.5	----
<b>Dissolved Metals (QCLot: 1599614)</b>						
Aluminum, dissolved	7429-90-5	E465S	0.005	mg/L	<0.0050	----
Antimony, dissolved	7440-36-0	E465S	0.001	mg/L	<0.0010	----
Arsenic, dissolved	7440-38-2	E465S	0.0004	mg/L	<0.00040	----
Barium, dissolved	7440-39-3	E465S	0.001	mg/L	<0.0010	----
Beryllium, dissolved	7440-41-7	E465S	0.0005	mg/L	<0.00050	----
Bismuth, dissolved	7440-69-9	E465S	0.0005	mg/L	<0.00050	----
Boron, dissolved	7440-42-8	E465S	0.3	mg/L	<0.30	----
Cadmium, dissolved	7440-43-9	E465S	0.00002	mg/L	<0.000020	----
Calcium, dissolved	7440-70-2	E465S	1	mg/L	<1.0	----
Cesium, dissolved	7440-46-2	E465S	0.0005	mg/L	<0.00050	----
Chromium, dissolved	7440-47-3	E465S	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E465S	0.00005	mg/L	<0.000050	----
Copper, dissolved	7440-50-8	E465S	0.0005	mg/L	<0.00050	----
Gallium, dissolved	7440-55-3	E465S	0.0005	mg/L	<0.00050	----
Iron, dissolved	7439-89-6	E465S	0.01	mg/L	<0.010	----
Lead, dissolved	7439-92-1	E465S	0.0001	mg/L	<0.00010	----
Lithium, dissolved	7439-93-2	E465S	0.02	mg/L	<0.020	----
Magnesium, dissolved	7439-95-4	E465S	1	mg/L	<1.0	----
Manganese, dissolved	7439-96-5	E465S	0.0001	mg/L	<0.00010	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Dissolved Metals (QCLot: 1599614) - continued</b>						
Molybdenum, dissolved	7439-98-7	E465S	0.0001	mg/L	<0.00010	----
Nickel, dissolved	7440-02-0	E465S	0.0005	mg/L	<0.00050	----
Phosphorus, dissolved	7723-14-0	E465S	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E465S	1	mg/L	<1.0	----
Rhenium, dissolved	7440-15-5	E465S	0.0005	mg/L	<0.00050	----
Rubidium, dissolved	7440-17-7	E465S	0.005	mg/L	<0.0050	----
Selenium, dissolved	7782-49-2	E465S	0.0005	mg/L	<0.00050	----
Silver, dissolved	7440-22-4	E465S	0.0001	mg/L	<0.00010	----
Strontium, dissolved	7440-24-6	E465S	0.01	mg/L	<0.010	----
Sulfur, dissolved	7704-34-9	E465S	5	mg/L	<5.0	----
Tellurium, dissolved	13494-80-9	E465S	0.0005	mg/L	<0.00050	----
Thallium, dissolved	7440-28-0	E465S	0.00005	mg/L	<0.000050	----
Thorium, dissolved	7440-29-1	E465S	0.0005	mg/L	<0.00050	----
Tin, dissolved	7440-31-5	E465S	0.001	mg/L	<0.0010	----
Titanium, dissolved	7440-32-6	E465S	0.005	mg/L	<0.0050	----
Tungsten, dissolved	7440-33-7	E465S	0.001	mg/L	<0.0010	----
Uranium, dissolved	7440-61-1	E465S	0.00005	mg/L	<0.000050	----
Vanadium, dissolved	7440-62-2	E465S	0.0005	mg/L	<0.00050	----
Yttrium, dissolved	7440-65-5	E465S	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E465S	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E465S	0.0005	mg/L	<0.00050	----
<b>Dissolved Metals (QCLot: 1605820)</b>						
Mercury, dissolved	7439-97-6	E509S	0.000005	mg/L	<0.0000050	----
<b>Volatile Organic Compounds (QCLot: 1601328)</b>						
Benzene	71-43-2	E611A	0.5	µg/L	<0.50	----
Ethylbenzene	100-41-4	E611A	0.5	µg/L	<0.50	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A	0.5	µg/L	<0.50	----
Styrene	100-42-5	E611A	0.5	µg/L	<0.50	----
Toluene	108-88-3	E611A	0.5	µg/L	<0.50	----
Xylene, m+p-	179601-23-1	E611A	0.4	µg/L	<0.40	----
Xylene, o-	95-47-6	E611A	0.3	µg/L	<0.30	----
<b>Hydrocarbons (QCLot: 1599079)</b>						
EPH (C10-C19)	----	E601A	250	µg/L	<250	----
EPH (C19-C32)	----	E601A	250	µg/L	<250	----
<b>Hydrocarbons (QCLot: 1599081)</b>						



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Hydrocarbons (QCLot: 1599081) - continued</b>						
F2 (C10-C16)	----	E601	100	µg/L	<100	----
F3 (C16-C34)	----	E601	250	µg/L	<250	----
F4 (C34-C50)	----	E601	250	µg/L	<250	----
<b>Hydrocarbons (QCLot: 1601327)</b>						
F1 (C6-C10)	----	E581.VH+F1	100	µg/L	<100	----
VHw (C6-C10)	----	E581.VH+F1	100	µg/L	<100	----
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 1599080)</b>						
Acenaphthene	83-32-9	E641A	0.01	µg/L	<0.010	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	<0.010	----
Acridine	260-94-6	E641A	0.01	µg/L	<0.010	----
Anthracene	120-12-7	E641A	0.01	µg/L	<0.010	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	<0.010	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	<0.0050	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	<0.010	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	<0.010	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	<0.010	----
Chrysene	218-01-9	E641A	0.01	µg/L	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	<0.0050	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	<0.010	----
Fluorene	86-73-7	E641A	0.01	µg/L	<0.010	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	<0.010	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	<0.010	----
Naphthalene	91-20-3	E641A	0.05	µg/L	<0.050	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	<0.020	----
Pyrene	129-00-0	E641A	0.01	µg/L	<0.010	----
Quinoline	91-22-5	E641A	0.05	µg/L	<0.050	----





Laboratory Control Sample (LCS) Report

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

Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1598383)									
Turbidity	----	E121	0.1	NTU	200 NTU	96.5	85.0	115	----
Physical Tests (QCLot: 1599353)									
Conductivity	----	E100S	2	µS/cm	147 µS/cm	98.9	80.0	120	----
Physical Tests (QCLot: 1599354)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	103	85.0	115	----
Physical Tests (QCLot: 1599355)									
pH	----	E108	----	pH units	7 pH units	100	98.0	102	----
Physical Tests (QCLot: 1601038)									
Solids, total suspended [TSS]	----	E160S	2	mg/L	150 mg/L	87.7	85.0	115	----
Physical Tests (QCLot: 1601040)									
Solids, total dissolved [TDS]	----	E162S	10	mg/L	1000 mg/L	100	85.0	115	----
Anions and Nutrients (QCLot: 1598936)									
Phosphorus, total dissolved	7723-14-0	E375-T	0.002	mg/L	0.05 mg/L	92.2	80.0	120	----
Anions and Nutrients (QCLot: 1598937)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	97.7	85.0	115	----
Anions and Nutrients (QCLot: 1598938)									
Kjeldahl nitrogen, total [TKN]	----	E318S	0.05	mg/L	4 mg/L	106	75.0	125	----
Anions and Nutrients (QCLot: 1598939)									
Phosphorus, total	7723-14-0	E372S	0.002	mg/L	0.05 mg/L	92.5	80.0	120	----
Anions and Nutrients (QCLot: 1599358)									
Nitrate (as N)	14797-55-8	E235S.NO3-T	0.01	mg/L	2.5 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 1599359)									
Nitrite (as N)	14797-65-0	E235S.NO2-L	0.01	mg/L	0.5 mg/L	97.7	90.0	110	----
Anions and Nutrients (QCLot: 1599361)									
Chloride	16887-00-6	E235S.Cl	50	mg/L	100 mg/L	102	90.0	110	----
Anions and Nutrients (QCLot: 1599363)									
Bromide	24959-67-9	E235S.Br	5	mg/L	0.5 mg/L	101	85.0	115	----
Anions and Nutrients (QCLot: 1599364)									
Fluoride	16984-48-8	E235S.F-L	0.2	mg/L	1 mg/L	98.8	90.0	110	----
Anions and Nutrients (QCLot: 1599365)									
Sulfate (as SO4)	14808-79-8	E235S.SO4-L	3	mg/L	100 mg/L	102	90.0	110	----



Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Organic / Inorganic Carbon (QCLot: 1598934)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	99.8	80.0	120	----
Organic / Inorganic Carbon (QCLot: 1598935)									
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	8.57 mg/L	94.7	80.0	120	----
Total Metals (QCLot: 1599644)									
Silicon, total	7440-21-3	E468S.NaSi	1	mg/L	10 mg/L	110	80.0	120	----
Sodium, total	7440-23-5	E468S.NaSi	2.5	mg/L	50 mg/L	99.5	80.0	120	----
Total Metals (QCLot: 1599646)									
Aluminum, total	7429-90-5	E466S	0.005	mg/L	2 mg/L	105	80.0	120	----
Antimony, total	7440-36-0	E466S	0.001	mg/L	1 mg/L	105	80.0	120	----
Arsenic, total	7440-38-2	E466S	0.0004	mg/L	1 mg/L	108	80.0	120	----
Barium, total	7440-39-3	E466S	0.001	mg/L	0.25 mg/L	107	80.0	120	----
Beryllium, total	7440-41-7	E466S	0.0005	mg/L	0.1 mg/L	104	80.0	120	----
Bismuth, total	7440-69-9	E466S	0.0005	mg/L	1 mg/L	104	80.0	120	----
Boron, total	7440-42-8	E466S	0.3	mg/L	1 mg/L	97.0	80.0	120	----
Cadmium, total	7440-43-9	E466S	0.00002	mg/L	0.1 mg/L	104	80.0	120	----
Calcium, total	7440-70-2	E466S	1	mg/L	50 mg/L	98.7	80.0	120	----
Cesium, total	7440-46-2	E466S	0.0005	mg/L	0.05 mg/L	105	80.0	120	----
Chromium, total	7440-47-3	E466S	0.0005	mg/L	0.25 mg/L	104	80.0	120	----
Cobalt, total	7440-48-4	E466S	0.00005	mg/L	0.25 mg/L	101	80.0	120	----
Copper, total	7440-50-8	E466S	0.0005	mg/L	0.25 mg/L	99.4	80.0	120	----
Gallium, total	7440-55-3	E466S	0.0005	mg/L	0.25 mg/L	101	80.0	120	----
Iron, total	7439-89-6	E466S	0.01	mg/L	1 mg/L	103	80.0	120	----
Lead, total	7439-92-1	E466S	0.0001	mg/L	0.5 mg/L	103	80.0	120	----
Lithium, total	7439-93-2	E466S	0.02	mg/L	0.25 mg/L	104	80.0	120	----
Magnesium, total	7439-95-4	E466S	1	mg/L	50 mg/L	111	80.0	120	----
Manganese, total	7439-96-5	E466S	0.0002	mg/L	0.25 mg/L	99.9	80.0	120	----
Molybdenum, total	7439-98-7	E466S	0.0001	mg/L	0.25 mg/L	102	80.0	120	----
Nickel, total	7440-02-0	E466S	0.0005	mg/L	0.5 mg/L	101	80.0	120	----
Phosphorus, total	7723-14-0	E466S	0.05	mg/L	10 mg/L	110	80.0	120	----
Potassium, total	7440-09-7	E466S	1	mg/L	50 mg/L	103	80.0	120	----
Rhenium, total	7440-15-5	E466S	0.0005	mg/L	0.1 mg/L	106	80.0	120	----
Rubidium, total	7440-17-7	E466S	0.005	mg/L	0.1 mg/L	101	80.0	120	----
Selenium, total	7782-49-2	E466S	0.0005	mg/L	1 mg/L	104	80.0	120	----
Silver, total	7440-22-4	E466S	0.0001	mg/L	0.1 mg/L	95.6	80.0	120	----



Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 1599646) - continued									
Strontium, total	7440-24-6	E466S	0.01	mg/L	0.25 mg/L	103	80.0	120	----
Sulfur, total	7704-34-9	E466S	5	mg/L	50 mg/L	112	80.0	120	----
Tellurium, total	13494-80-9	E466S	0.0005	mg/L	0.1 mg/L	104	80.0	120	----
Thallium, total	7440-28-0	E466S	0.00005	mg/L	1 mg/L	103	80.0	120	----
Thorium, total	7440-29-1	E466S	0.0005	mg/L	0.1 mg/L	98.0	80.0	120	----
Tin, total	7440-31-5	E466S	0.001	mg/L	0.5 mg/L	104	80.0	120	----
Titanium, total	7440-32-6	E466S	0.005	mg/L	0.25 mg/L	105	80.0	120	----
Tungsten, total	7440-33-7	E466S	0.001	mg/L	0.1 mg/L	101	80.0	120	----
Uranium, total	7440-61-1	E466S	0.00005	mg/L	0.005 mg/L	102	80.0	120	----
Vanadium, total	7440-62-2	E466S	0.0005	mg/L	0.5 mg/L	102	80.0	120	----
Yttrium, total	7440-65-5	E466S	0.0005	mg/L	0.1 mg/L	105	80.0	120	----
Zinc, total	7440-66-6	E466S	0.003	mg/L	0.5 mg/L	102	80.0	120	----
Zirconium, total	7440-67-7	E466S	0.0005	mg/L	0.1 mg/L	101	80.0	120	----
Total Metals (QCLot: 1601043)									
Mercury, total	7439-97-6	E508S	0.000005	mg/L	0 mg/L	97.1	80.0	120	----
Silicon, dissolved	7440-21-3	E469S.NaSi	1	mg/L	10 mg/L	111	80.0	120	----
Sodium, dissolved	7440-23-5	E469S.NaSi	2.5	mg/L	50 mg/L	105	80.0	120	----
Dissolved Metals (QCLot: 1599614)									
Aluminum, dissolved	7429-90-5	E465S	0.005	mg/L	2 mg/L	93.7	80.0	120	----
Antimony, dissolved	7440-36-0	E465S	0.001	mg/L	1 mg/L	103	80.0	120	----
Arsenic, dissolved	7440-38-2	E465S	0.0004	mg/L	1 mg/L	102	80.0	120	----
Barium, dissolved	7440-39-3	E465S	0.001	mg/L	0.25 mg/L	105	80.0	120	----
Beryllium, dissolved	7440-41-7	E465S	0.0005	mg/L	0.1 mg/L	99.4	80.0	120	----
Bismuth, dissolved	7440-69-9	E465S	0.0005	mg/L	1 mg/L	100	80.0	120	----
Boron, dissolved	7440-42-8	E465S	0.3	mg/L	1 mg/L	102	80.0	120	----
Cadmium, dissolved	7440-43-9	E465S	0.00002	mg/L	0.1 mg/L	99.5	80.0	120	----
Calcium, dissolved	7440-70-2	E465S	1	mg/L	50 mg/L	98.4	80.0	120	----
Cesium, dissolved	7440-46-2	E465S	0.0005	mg/L	0.05 mg/L	102	80.0	120	----
Chromium, dissolved	7440-47-3	E465S	0.0005	mg/L	0.25 mg/L	94.0	80.0	120	----
Cobalt, dissolved	7440-48-4	E465S	0.00005	mg/L	0.25 mg/L	92.8	80.0	120	----
Copper, dissolved	7440-50-8	E465S	0.0005	mg/L	0.25 mg/L	90.4	80.0	120	----
Gallium, dissolved	7440-55-3	E465S	0.0005	mg/L	0.25 mg/L	98.2	80.0	120	----
Iron, dissolved	7439-89-6	E465S	0.01	mg/L	1 mg/L	94.2	80.0	120	----
Lead, dissolved	7439-92-1	E465S	0.0001	mg/L	0.5 mg/L	96.9	80.0	120	----
Lithium, dissolved	7439-93-2	E465S	0.02	mg/L	0.25 mg/L	102	80.0	120	----



Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 1599614) - continued									
Magnesium, dissolved	7439-95-4	E465S	1	mg/L	50 mg/L	106	80.0	120	----
Manganese, dissolved	7439-96-5	E465S	0.0001	mg/L	0.25 mg/L	90.7	80.0	120	----
Molybdenum, dissolved	7439-98-7	E465S	0.0001	mg/L	0.25 mg/L	91.4	80.0	120	----
Nickel, dissolved	7440-02-0	E465S	0.0005	mg/L	0.5 mg/L	93.4	80.0	120	----
Phosphorus, dissolved	7723-14-0	E465S	0.05	mg/L	10 mg/L	103	80.0	120	----
Potassium, dissolved	7440-09-7	E465S	1	mg/L	50 mg/L	99.1	80.0	120	----
Rhenium, dissolved	7440-15-5	E465S	0.0005	mg/L	0.1 mg/L	103	80.0	120	----
Rubidium, dissolved	7440-17-7	E465S	0.005	mg/L	0.1 mg/L	91.4	80.0	120	----
Selenium, dissolved	7782-49-2	E465S	0.0005	mg/L	1 mg/L	102	80.0	120	----
Silver, dissolved	7440-22-4	E465S	0.0001	mg/L	0.1 mg/L	91.9	80.0	120	----
Strontium, dissolved	7440-24-6	E465S	0.01	mg/L	0.25 mg/L	92.5	80.0	120	----
Sulfur, dissolved	7704-34-9	E465S	5	mg/L	50 mg/L	106	80.0	120	----
Tellurium, dissolved	13494-80-9	E465S	0.0005	mg/L	0.1 mg/L	99.0	80.0	120	----
Thallium, dissolved	7440-28-0	E465S	0.00005	mg/L	1 mg/L	98.5	80.0	120	----
Thorium, dissolved	7440-29-1	E465S	0.0005	mg/L	0.1 mg/L	102	80.0	120	----
Tin, dissolved	7440-31-5	E465S	0.001	mg/L	0.5 mg/L	99.8	80.0	120	----
Titanium, dissolved	7440-32-6	E465S	0.005	mg/L	0.25 mg/L	98.3	80.0	120	----
Tungsten, dissolved	7440-33-7	E465S	0.001	mg/L	0.1 mg/L	98.1	80.0	120	----
Uranium, dissolved	7440-61-1	E465S	0.00005	mg/L	0.005 mg/L	97.5	80.0	120	----
Vanadium, dissolved	7440-62-2	E465S	0.0005	mg/L	0.5 mg/L	94.5	80.0	120	----
Yttrium, dissolved	7440-65-5	E465S	0.0005	mg/L	0.1 mg/L	97.8	80.0	120	----
Zinc, dissolved	7440-66-6	E465S	0.001	mg/L	0.5 mg/L	91.9	80.0	120	----
Zirconium, dissolved	7440-67-7	E465S	0.0005	mg/L	0.1 mg/L	96.4	80.0	120	----
Mercury, dissolved	7439-97-6	E509S	0.000005	mg/L	0 mg/L	100	80.0	120	----
Volatile Organic Compounds (QCLot: 1601328)									
Benzene	71-43-2	E611A	0.5	µg/L	100 µg/L	107	70.0	130	----
Ethylbenzene	100-41-4	E611A	0.5	µg/L	100 µg/L	110	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A	0.5	µg/L	100 µg/L	106	70.0	130	----
Styrene	100-42-5	E611A	0.5	µg/L	100 µg/L	99.1	70.0	130	----
Toluene	108-88-3	E611A	0.5	µg/L	100 µg/L	115	70.0	130	----
Xylene, m+p-	179601-23-1	E611A	0.4	µg/L	200 µg/L	118	70.0	130	----
Xylene, o-	95-47-6	E611A	0.3	µg/L	100 µg/L	108	70.0	130	----
Hydrocarbons (QCLot: 1599079)									
EPH (C10-C19)	----	E601A	250	µg/L	6490 µg/L	96.7	70.0	130	----



Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Hydrocarbons (QCLot: 1599079) - continued									
EPH (C19-C32)	----	E601A	250	µg/L	3360 µg/L	103	70.0	130	----
Hydrocarbons (QCLot: 1599081)									
F2 (C10-C16)	----	E601	100	µg/L	3540 µg/L	104	70.0	130	----
F3 (C16-C34)	----	E601	250	µg/L	7050 µg/L	100	70.0	130	----
F4 (C34-C50)	----	E601	250	µg/L	5050 µg/L	106	70.0	130	----
Hydrocarbons (QCLot: 1601327)									
F1 (C6-C10)	----	E581.VH+F1	100	µg/L	6310 µg/L	106	70.0	130	----
VHw (C6-C10)	----	E581.VH+F1	100	µg/L	6310 µg/L	107	70.0	130	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1599080)									
Acenaphthene	83-32-9	E641A	0.01	µg/L	0.5 µg/L	90.8	60.0	130	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	0.5 µg/L	95.6	60.0	130	----
Acridine	260-94-6	E641A	0.01	µg/L	0.5 µg/L	90.5	60.0	130	----
Anthracene	120-12-7	E641A	0.01	µg/L	0.5 µg/L	94.3	60.0	130	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	0.5 µg/L	81.3	60.0	130	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	0.5 µg/L	93.4	60.0	130	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	0.5 µg/L	80.9	60.0	130	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	0.5 µg/L	93.2	60.0	130	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	0.5 µg/L	94.1	60.0	130	----
Chrysene	218-01-9	E641A	0.01	µg/L	0.5 µg/L	95.0	60.0	130	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	0.5 µg/L	90.6	60.0	130	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	0.5 µg/L	88.9	60.0	130	----
Fluorene	86-73-7	E641A	0.01	µg/L	0.5 µg/L	93.0	60.0	130	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	0.5 µg/L	80.5	60.0	130	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	0.5 µg/L	90.5	60.0	130	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	0.5 µg/L	91.6	60.0	130	----
Naphthalene	91-20-3	E641A	0.05	µg/L	0.5 µg/L	87.0	50.0	130	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	0.5 µg/L	95.6	60.0	130	----
Pyrene	129-00-0	E641A	0.01	µg/L	0.5 µg/L	87.3	60.0	130	----
Quinoline	91-22-5	E641A	0.05	µg/L	0.5 µg/L	96.3	60.0	130	----



Matrix Spike (MS) Report

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

Laboratory sample ID					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	Target	MS	Low	High	
Client sample ID	Analyte	CAS Number	Method							
Anions and Nutrients (QCLot: 1598936)										
VA24C0463-006	Anonymous	Phosphorus, total dissolved	7723-14-0	E375-T	ND mg/L	----	ND	70.0	130	----
Anions and Nutrients (QCLot: 1598937)										
VA24C0463-006	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.105 mg/L	0.1 mg/L	105	75.0	125	----
Anions and Nutrients (QCLot: 1598938)										
YL2401157-002	KLK-Ref-1	Kjeldahl nitrogen, total [TKN]	----	E318S	5.47 mg/L	5 mg/L	109	70.0	130	----
Anions and Nutrients (QCLot: 1598939)										
VA24C0463-006	Anonymous	Phosphorus, total	7723-14-0	E372S	ND mg/L	----	ND	70.0	130	----
Anions and Nutrients (QCLot: 1599358)										
VA24C0462-004	Anonymous	Nitrate (as N)	14797-55-8	E235S.NO3-T	7.71 mg/L	7.5 mg/L	103	75.0	125	----
Anions and Nutrients (QCLot: 1599359)										
VA24C0462-004	Anonymous	Nitrite (as N)	14797-65-0	E235S.NO2-L	1.50 mg/L	1.5 mg/L	100	75.0	125	----
Anions and Nutrients (QCLot: 1599361)										
VA24C0462-004	Anonymous	Chloride	16887-00-6	E235S.Cl	10200 mg/L	10000 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 1599363)										
YL2401157-002	KLK-Ref-1	Bromide	24959-67-9	E235S.Br	52.9 mg/L	50 mg/L	106	75.0	125	----
Anions and Nutrients (QCLot: 1599364)										
YL2401157-002	KLK-Ref-1	Fluoride	16984-48-8	E235S.F-L	10.0 mg/L	10 mg/L	100	75.0	125	----
Anions and Nutrients (QCLot: 1599365)										
YL2401157-002	KLK-Ref-1	Sulfate (as SO4)	14808-79-8	E235S.SO4-L	ND mg/L	----	ND	75.0	125	----
Organic / Inorganic Carbon (QCLot: 1598934)										
YL2401157-002	KLK-Ref-1	Carbon, dissolved organic [DOC]	----	E358-L	4.86 mg/L	5 mg/L	97.2	70.0	130	----
Organic / Inorganic Carbon (QCLot: 1598935)										
YL2401157-002	KLK-Ref-1	Carbon, total organic [TOC]	----	E355-L	4.88 mg/L	5 mg/L	97.5	70.0	130	----
Total Metals (QCLot: 1599644)										
VA24C0462-004	Anonymous	Silicon, total	7440-21-3	E468S.NaSi	504 mg/L	500 mg/L	101	70.0	130	----
		Sodium, total	7440-23-5	E468S.NaSi	ND mg/L	----	ND	70.0	130	----
Total Metals (QCLot: 1599646)										
VA24C0462-004	Anonymous	Aluminum, total	7429-90-5	E466S	4.05 mg/L	4 mg/L	101	70.0	130	----
		Antimony, total	7440-36-0	E466S	0.381 mg/L	0.4 mg/L	95.2	70.0	130	----
		Arsenic, total	7440-38-2	E466S	0.410 mg/L	0.4 mg/L	102	70.0	130	----
		Barium, total	7440-39-3	E466S	0.400 mg/L	0.4 mg/L	100	70.0	130	----



Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Total Metals (QCLot: 1599646) - continued										
VA24C0462-004	Anonymous	Beryllium, total	7440-41-7	E466S	0.792 mg/L	0.8 mg/L	99.1	70.0	130	----
		Bismuth, total	7440-69-9	E466S	0.188 mg/L	0.2 mg/L	94.3	70.0	130	----
		Boron, total	7440-42-8	E466S	1.92 mg/L	2 mg/L	96.1	70.0	130	----
		Cadmium, total	7440-43-9	E466S	0.0780 mg/L	0.08 mg/L	97.5	70.0	130	----
		Calcium, total	7440-70-2	E466S	ND mg/L	----	ND	70.0	130	----
		Cesium, total	7440-46-2	E466S	0.194 mg/L	0.2 mg/L	97.0	70.0	130	----
		Chromium, total	7440-47-3	E466S	0.799 mg/L	0.8 mg/L	99.9	70.0	130	----
		Cobalt, total	7440-48-4	E466S	0.387 mg/L	0.4 mg/L	96.7	70.0	130	----
		Copper, total	7440-50-8	E466S	0.373 mg/L	0.4 mg/L	93.4	70.0	130	----
		Gallium, total	7440-55-3	E466S	0.0486 mg/L	0.05 mg/L	97.3	70.0	130	----
		Iron, total	7439-89-6	E466S	39.4 mg/L	40 mg/L	98.6	70.0	130	----
		Lead, total	7439-92-1	E466S	0.374 mg/L	0.4 mg/L	93.4	70.0	130	----
		Lithium, total	7439-93-2	E466S	2.03 mg/L	2 mg/L	101	70.0	130	----
		Magnesium, total	7439-95-4	E466S	ND mg/L	----	ND	70.0	130	----
		Manganese, total	7439-96-5	E466S	0.390 mg/L	0.4 mg/L	97.5	70.0	130	----
		Molybdenum, total	7439-98-7	E466S	0.402 mg/L	0.4 mg/L	100	70.0	130	----
		Nickel, total	7440-02-0	E466S	0.763 mg/L	0.8 mg/L	95.4	70.0	130	----
		Phosphorus, total	7723-14-0	E466S	204 mg/L	200 mg/L	102	70.0	130	----
		Potassium, total	7440-09-7	E466S	76.5 mg/L	80 mg/L	95.6	70.0	130	----
		Rhenium, total	7440-15-5	E466S	0.0485 mg/L	0.05 mg/L	97.1	70.0	130	----
		Rubidium, total	7440-17-7	E466S	0.395 mg/L	0.4 mg/L	98.7	70.0	130	----
		Selenium, total	7782-49-2	E466S	0.814 mg/L	0.8 mg/L	102	70.0	130	----
		Silver, total	7440-22-4	E466S	0.0753 mg/L	0.08 mg/L	94.1	70.0	130	----
		Strontium, total	7440-24-6	E466S	ND mg/L	----	ND	70.0	130	----
		Sulfur, total	7704-34-9	E466S	383 mg/L	400 mg/L	95.8	70.0	130	----
		Tellurium, total	13494-80-9	E466S	0.766 mg/L	0.8 mg/L	95.7	70.0	130	----
		Thallium, total	7440-28-0	E466S	0.0738 mg/L	0.08 mg/L	92.3	70.0	130	----
		Thorium, total	7440-29-1	E466S	0.349 mg/L	0.4 mg/L	87.3	70.0	130	----
		Tin, total	7440-31-5	E466S	0.383 mg/L	0.4 mg/L	95.7	70.0	130	----
		Titanium, total	7440-32-6	E466S	0.786 mg/L	0.8 mg/L	98.2	70.0	130	----
		Tungsten, total	7440-33-7	E466S	0.380 mg/L	0.4 mg/L	95.1	70.0	130	----
		Uranium, total	7440-61-1	E466S	0.0784 mg/L	0.08 mg/L	98.0	70.0	130	----
		Vanadium, total	7440-62-2	E466S	2.02 mg/L	2 mg/L	101	70.0	130	----
		Yttrium, total	7440-65-5	E466S	0.0490 mg/L	0.05 mg/L	98.0	70.0	130	----
		Zinc, total	7440-66-6	E466S	7.86 mg/L	8 mg/L	98.2	70.0	130	----
		Zirconium, total	7440-67-7	E466S	0.734 mg/L	0.8 mg/L	91.8	70.0	130	----
Total Metals (QCLot: 1601043)										
VA24C0194-002	Anonymous	Mercury, total	7439-97-6	E508S	0.0000976 mg/L	0 mg/L	97.6	70.0	130	----
Dissolved Metals (QCLot: 1599611)										
VA24C0462-004	Anonymous	Silicon, dissolved	7440-21-3	E469S.NaSi	494 mg/L	500 mg/L	98.8	70.0	130	----
		Sodium, dissolved	7440-23-5	E469S.NaSi	ND mg/L	----	ND	70.0	130	----
Dissolved Metals (QCLot: 1599614)										
VA24C0462-004	Anonymous	Aluminum, dissolved	7429-90-5	E465S	3.72 mg/L	4 mg/L	93.0	70.0	130	----



Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		Qualifier
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	
Dissolved Metals (QCLot: 1599614) - continued										
VA24C0462-004	Anonymous	Antimony, dissolved	7440-36-0	E465S	0.386 mg/L	0.4 mg/L	96.5	70.0	130	----
		Arsenic, dissolved	7440-38-2	E465S	0.405 mg/L	0.4 mg/L	101	70.0	130	----
		Barium, dissolved	7440-39-3	E465S	0.412 mg/L	0.4 mg/L	103	70.0	130	----
		Beryllium, dissolved	7440-41-7	E465S	0.760 mg/L	0.8 mg/L	95.0	70.0	130	----
		Bismuth, dissolved	7440-69-9	E465S	0.181 mg/L	0.2 mg/L	90.7	70.0	130	----
		Boron, dissolved	7440-42-8	E465S	2.12 mg/L	2 mg/L	106	70.0	130	----
		Cadmium, dissolved	7440-43-9	E465S	0.0771 mg/L	0.08 mg/L	96.4	70.0	130	----
		Calcium, dissolved	7440-70-2	E465S	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E465S	0.201 mg/L	0.2 mg/L	100	70.0	130	----
		Chromium, dissolved	7440-47-3	E465S	0.761 mg/L	0.8 mg/L	95.1	70.0	130	----
		Cobalt, dissolved	7440-48-4	E465S	0.363 mg/L	0.4 mg/L	90.7	70.0	130	----
		Copper, dissolved	7440-50-8	E465S	0.353 mg/L	0.4 mg/L	88.2	70.0	130	----
		Gallium, dissolved	7440-55-3	E465S	0.0485 mg/L	0.05 mg/L	97.0	70.0	130	----
		Iron, dissolved	7439-89-6	E465S	36.9 mg/L	40 mg/L	92.2	70.0	130	----
		Lead, dissolved	7439-92-1	E465S	0.363 mg/L	0.4 mg/L	90.7	70.0	130	----
		Lithium, dissolved	7439-93-2	E465S	2.05 mg/L	2 mg/L	102	70.0	130	----
		Magnesium, dissolved	7439-95-4	E465S	ND mg/L	----	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E465S	0.363 mg/L	0.4 mg/L	90.8	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E465S	0.369 mg/L	0.4 mg/L	92.3	70.0	130	----
		Nickel, dissolved	7440-02-0	E465S	0.720 mg/L	0.8 mg/L	90.0	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E465S	202 mg/L	200 mg/L	101	70.0	130	----
		Potassium, dissolved	7440-09-7	E465S	76.4 mg/L	80 mg/L	95.5	70.0	130	----
		Rhenium, dissolved	7440-15-5	E465S	0.0491 mg/L	0.05 mg/L	98.2	70.0	130	----
		Rubidium, dissolved	7440-17-7	E465S	0.366 mg/L	0.4 mg/L	91.5	70.0	130	----
		Selenium, dissolved	7782-49-2	E465S	0.819 mg/L	0.8 mg/L	102	70.0	130	----
		Silver, dissolved	7440-22-4	E465S	0.0743 mg/L	0.08 mg/L	92.9	70.0	130	----
		Strontium, dissolved	7440-24-6	E465S	ND mg/L	----	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E465S	383 mg/L	400 mg/L	95.7	70.0	130	----
		Tellurium, dissolved	13494-80-9	E465S	0.779 mg/L	0.8 mg/L	97.4	70.0	130	----
		Thallium, dissolved	7440-28-0	E465S	0.0725 mg/L	0.08 mg/L	90.6	70.0	130	----
		Thorium, dissolved	7440-29-1	E465S	0.364 mg/L	0.4 mg/L	91.1	70.0	130	----
		Tin, dissolved	7440-31-5	E465S	0.387 mg/L	0.4 mg/L	96.7	70.0	130	----
		Titanium, dissolved	7440-32-6	E465S	0.777 mg/L	0.8 mg/L	97.1	70.0	130	----
		Tungsten, dissolved	7440-33-7	E465S	0.373 mg/L	0.4 mg/L	93.2	70.0	130	----
		Uranium, dissolved	7440-61-1	E465S	0.0802 mg/L	0.08 mg/L	100	70.0	130	----
		Vanadium, dissolved	7440-62-2	E465S	1.91 mg/L	2 mg/L	95.6	70.0	130	----
		Yttrium, dissolved	7440-65-5	E465S	0.0477 mg/L	0.05 mg/L	95.3	70.0	130	----
		Zinc, dissolved	7440-66-6	E465S	7.35 mg/L	8 mg/L	91.9	70.0	130	----
		Zirconium, dissolved	7440-67-7	E465S	0.714 mg/L	0.8 mg/L	89.2	70.0	130	----
Dissolved Metals (QCLot: 1605820)										
YL2401157-002	KLK-Ref-1	Mercury, dissolved	7439-97-6	E509S	0.000100 mg/L	0 mg/L	100	70.0	130	----
Volatile Organic Compounds (QCLot: 1601328)										
VA24C0791-005	Anonymous	Benzene	71-43-2	E611A	96.5 µg/L	100 µg/L	96.5	60.0	140	----





Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 1601328) - continued										
VA24C0791-005	Anonymous	Ethylbenzene	100-41-4	E611A	104 µg/L	100 µg/L	104	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A	102 µg/L	100 µg/L	102	60.0	140	----
		Styrene	100-42-5	E611A	94.2 µg/L	100 µg/L	94.2	60.0	140	----
		Toluene	108-88-3	E611A	108 µg/L	100 µg/L	108	60.0	140	----
		Xylene, m+p-	179601-23-1	E611A	220 µg/L	200 µg/L	110	60.0	140	----
		Xylene, o-	95-47-6	E611A	103 µg/L	100 µg/L	103	60.0	140	----
Hydrocarbons (QCLot: 1601327)										
VA24C0791-003	Anonymous	F1 (C6-C10)	----	E581.VH+F1	6010 µg/L	6310 µg/L	95.3	60.0	140	----
		VHw (C6-C10)	----	E581.VH+F1	6040 µg/L	6310 µg/L	95.7	60.0	140	----

<b>Report To</b>		Contact and company name below will appear on the final report	
Company:	WSP Canada Inc.	<b>Reports / Recipients</b>	
Contact:	Senior Training/Connor Pettem		
Phone:	1-604-297-2030/1-604-296-4200		
Street:	Company address below will appear on the final report		
City/Province:	840 Howe Street, 10th Floor Vancouver, BC	<b>Turnaround Time (TAT) Requested</b>	
Postal Code:	V6Z 2M1		
Invoice To	Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		
Company:	Copy of Invoice with Report <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
Contact:		<b>Analysis Request</b>	
<b>Project Information</b>			
ALS Account # / Quote #:			
Job #:	GOLD100-011		
PO / AFE:	CA0026317.6821/86000/03	<b>For all tests with rush TATs requested, please contact your A/E to confirm availability.</b>	
LSD:			
ALS Lab Work Order # (ALS use only):			
ALS Sample # (ALS use only)			
Sample Identification and/or Coordinates (This description will appear on the report)		<b>SAMPLES ON HOLD</b>	
Ref -1			
Klk -Ref -1			
TOT -Ref -1			
DUP-F		<b>EXTENDED STORAGE REQUIRED</b>	
		<b>SUSPECTED HAZARD (see notes)</b>	
Telephone : +1 867 873 5693			
Drinking Water (DW) Samples (client use)			
Are samples taken from a Regulated DW System?			
Are samples for human consumption/ use?			
SHIPMENT RELEASE (client use)			
Released by: <i>Shane L. L...</i> Date: <i>10-Nov-2024</i> Time: <i>13:30</i>			
INITIAL SHIPMENT RECEPTION (ALS use only)			
Received by: <i>[Signature]</i> Date: <i>Nov-12-2024</i>			
WHITE - LABORATORY COPY YELLOW - CLIENT COPY			
FINAL SHIPMENT RECEPTION (ALS use only)			
Received by: <i>[Signature]</i> Date: <i>11-24</i> Time: <i>11:24</i>			
Cooling Method: <input type="checkbox"/> NONE <input type="checkbox"/> ICE <input type="checkbox"/> ICE PACKS <input type="checkbox"/> FROZEN <input type="checkbox"/> COOLING INITIATED			
Submission Comments identified on Sample Receipt Notification: <input type="checkbox"/> YES <input type="checkbox"/> NO			
Cooler Custody Seals Intact: <input type="checkbox"/> YES <input type="checkbox"/> N/A Sample Custody Seals Intact: <input type="checkbox"/> YES <input type="checkbox"/> N/A			
INITIAL COOLER TEMPERATURES °C			
FINAL COOLER TEMPERATURES °C			
6.8			

## CERTIFICATE OF ANALYSIS

Work Order	: YL2401152	Page	: 1 of 7
Client	: WSP Canada Inc.	Laboratory	: ALS Environmental - Yellowknife
Contact	: Adrienne Ducharme	Account Manager	: Amber Springer
Address	: 840 Howe St, 10th Floor Vancouver BC Canada V6Z 2S9	Address	: 314 Old Airport Road, Unit 116 Yellowknife NT Canada X1A 3T3
Telephone	: ----	Telephone	: +1 867 873 5593
Project	: CA0026317.6821/86000/03	Date Samples Received	: 12-Aug-2024 11:24
PO	: ----	Date Analysis Commenced	: 15-Aug-2024
C-O-C number	: ----	Issue Date	: 20-Aug-2024 09:45
Sampler	: ----		
Site	: Baffinland Milne Port		
Quote number	: VA24-GOLD100-011		
No. of samples received	: 3		
No. of samples analysed	: 3		

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

## Signatories

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

Signatories	Position	Laboratory Department
Colby Bingham	Laboratory Supervisor	Inorganics, Saskatoon, Saskatchewan
Cynthia Bauer	Organic Supervisor	Organics, Calgary, Alberta
George Huang	Supervisor - Inorganic	Metals, Calgary, Alberta
Hedy Lai	Team Leader - Inorganics	Sask Soils, Saskatoon, Saskatchewan
Maqsood UIHassan	Laboratory Analyst	Organics, Calgary, Alberta
Marsha Calero	Laboratory Assistant	Organics, Calgary, Alberta
Mervat Lamose	Lab Assistant	Inorganics, Calgary, Alberta
Shirley Li	Team Leader - Inorganics	Metals, Calgary, Alberta
Xihua Yao	Laboratory Analyst	Inorganics, Saskatoon, Saskatchewan
Xihua Yao	Laboratory Analyst	Sask Soils, Saskatoon, Saskatchewan



## General Comments

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

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

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

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

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

Unit	Description
-	no units
%	percent
mg/kg	milligrams per kilogram
pH units	pH units

<: less than.

>: greater than.

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

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

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



Analytical Results

Sub-Matrix: Soil/Solid				Client sample ID	TGT-Ref-1-SG	KLK-Ref-1-SG	DUPA-SG	----	----
(Matrix: Soil/Solid)									
				Client sampling date / time	09-Aug-2024 12:00	09-Aug-2024 10:00	09-Aug-2024 00:00	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	YL2401152-001	YL2401152-002	YL2401152-003	-----	-----
					Result	Result	Result	----	----
Physical Tests									
Moisture	----	E144/CG	0.25	%	27.7	28.0	21.8	----	----
pH (1:2 soil:water)	----	E108/CG	0.10	pH units	8.57	8.62	8.51	----	----
Particle Size									
Gravel (>2mm)	----	EC184E/SK	1.0	%	<1.0	10.6	7.0	----	----
Sand (2.0mm - 0.063mm)	----	EC184E/SK	1.0	%	91.3	75.3	78.0	----	----
Silt (0.063mm - 0.004mm)	----	EC184E/SK	1.0	%	6.8	9.9	10.2	----	----
Clay (<0.004mm)	----	EC184E/SK	1.0	%	1.9	4.2	4.8	----	----
Percent Passing									
Passing (0.002mm)	----	E184/SK	1.0	%	1.6	3.3	3.8	----	----
Passing (0.004mm)	----	E184/SK	1.0	%	1.9	4.2	4.8	----	----
Passing (0.005mm)	----	E184/SK	1.0	%	2.0	4.6	5.2	----	----
Passing (0.020mm)	----	E184/SK	1.0	%	3.9	8.9	9.8	----	----
Passing (0.0312mm)	----	E184/SK	1.0	%	5.0	10.4	11.2	----	----
Passing (0.05mm)	----	E182/SK	1.0	%	7.0	12.8	13.6	----	----
Passing (0.063mm)	----	E182/SK	1.0	%	8.7	14.1	15.0	----	----
Passing (0.075mm)	----	E182/SK	1.0	%	10.2	15.3	16.4	----	----
Passing (0.125mm)	----	E182/SK	1.0	%	16.7	20.3	21.8	----	----
Passing (0.149mm)	----	E182/SK	1.0	%	20.7	26.1	28.2	----	----
Passing (0.250mm)	----	E182/SK	1.0	%	37.7	50.4	54.9	----	----
Passing (0.420mm)	----	E182/SK	1.0	%	77.2	67.7	73.1	----	----
Passing (0.50mm)	----	E182/SK	1.0	%	95.8	75.8	81.7	----	----
Passing (0.841mm)	----	E182/SK	1.0	%	98.2	81.0	85.6	----	----
Passing (1.0mm)	----	E182/SK	1.0	%	99.4	83.4	87.4	----	----
Passing (19mm)	----	E181/SK	1.0	%	100	94.8	100	----	----
Passing (2.0mm)	----	E181/SK	1.0	%	100	89.4	93.0	----	----
Passing (25.4mm)	----	E181/SK	1.0	%	100	96.7	100	----	----
Passing (38.1mm)	----	E181/SK	1.0	%	100	100	100	----	----
Passing (4.75mm)	----	E181/SK	1.0	%	100	90.6	94.0	----	----
Passing (50.8mm)	----	E181/SK	1.0	%	100	100	100	----	----



Analytical Results

Sub-Matrix: Soil/Solid					Client sample ID	TGT-Ref-1-SG	KLK-Ref-1-SG	DUPA-SG	----	----
(Matrix: Soil/Solid)										
Client sampling date / time					09-Aug-2024 12:00	09-Aug-2024 10:00	09-Aug-2024 00:00	----	----	
Analyte	CAS Number	Method/Lab	LOR	Unit	YL2401152-001	YL2401152-002	YL2401152-003	-----	-----	
					Result	Result	Result	----	----	
Percent Passing										
Passing (76.2mm)	----	E181/SK	1.0	%	100	100	100	----	----	
Passing (9.5mm)	----	E181/SK	1.0	%	100	92.6	96.2	----	----	
Organic / Inorganic Carbon										
Carbon, total [TC]	----	E351/SK	0.050	%	0.355	3.32	3.28	----	----	
Carbon, inorganic [IC]	----	E354/SK	0.050	%	0.107	2.33	2.29	----	----	
Carbon, inorganic [IC], (as CaCO3 equivalent)	----	E354/SK	0.40	%	0.89	19.4	19.1	----	----	
Carbon, total organic [TOC]	----	EC356/SK	0.050	%	0.248	0.990	0.990	----	----	
Organic matter	----	EC356/SK	0.10	%	0.43	1.71	1.71	----	----	
Metals										
Aluminum	7429-90-5	E440/CG	50	mg/kg	5390	6790	6710	----	----	
Antimony	7440-36-0	E440/CG	0.10	mg/kg	<0.10	<0.10	<0.10	----	----	
Arsenic	7440-38-2	E440/CG	0.10	mg/kg	1.60	3.80	3.44	----	----	
Barium	7440-39-3	E440/CG	0.50	mg/kg	16.6	36.1	48.7	----	----	
Beryllium	7440-41-7	E440/CG	0.10	mg/kg	0.40	0.34	0.34	----	----	
Bismuth	7440-69-9	E440/CG	0.20	mg/kg	<0.20	<0.20	<0.20	----	----	
Boron	7440-42-8	E440/CG	5.0	mg/kg	7.6	26.0	27.4	----	----	
Cadmium	7440-43-9	E440/CG	0.020	mg/kg	<0.020	0.054	0.067	----	----	
Calcium	7440-70-2	E440/CG	50	mg/kg	3500	60300	62400	----	----	
Chromium	7440-47-3	E440/CG	0.50	mg/kg	12.2	16.5	16.6	----	----	
Cobalt	7440-48-4	E440/CG	0.10	mg/kg	3.29	3.53	3.25	----	----	
Copper	7440-50-8	E440/CG	0.50	mg/kg	5.04	4.69	5.42	----	----	
Iron	7439-89-6	E440/CG	50	mg/kg	10700	11900	11800	----	----	
Lead	7439-92-1	E440/CG	0.50	mg/kg	3.49	5.56	5.80	----	----	
Lithium	7439-93-2	E440/CG	2.0	mg/kg	11.4	16.8	16.2	----	----	
Magnesium	7439-95-4	E440/CG	20	mg/kg	6530	16400	16600	----	----	
Manganese	7439-96-5	E440/CG	1.0	mg/kg	84.3	104	97.7	----	----	
Mercury	7439-97-6	E510/CG	0.0050	mg/kg	<0.0050	0.0099	0.0113	----	----	
Molybdenum	7439-98-7	E440/CG	0.10	mg/kg	0.21	0.23	0.22	----	----	
Nickel	7440-02-0	E440/CG	0.50	mg/kg	7.51	11.3	10.9	----	----	
Phosphorus	7723-14-0	E440/CG	50	mg/kg	407	354	342	----	----	





Analytical Results

Sub-Matrix: Soil/Solid					Client sample ID	TGT-Ref-1-SG	KLK-Ref-1-SG	DUPA-SG	----	----
(Matrix: Soil/Solid)										
Client sampling date / time					09-Aug-2024 12:00	09-Aug-2024 10:00	09-Aug-2024 00:00	----	----	
Analyte	CAS Number	Method/Lab	LOR	Unit	YL2401152-001	YL2401152-002	YL2401152-003	-----	-----	
					Result	Result	Result	----	----	
Metals										
Potassium	7440-09-7	E440/CG	100	mg/kg	1200	1740	1800	----	----	
Selenium	7782-49-2	E440/CG	0.20	mg/kg	<0.20	<0.20	0.20	----	----	
Silver	7440-22-4	E440/CG	0.10	mg/kg	<0.10	<0.10	<0.10	----	----	
Sodium	7440-23-5	E440/CG	50	mg/kg	2810	3500	3210	----	----	
Strontium	7440-24-6	E440/CG	0.50	mg/kg	8.26	58.8	56.0	----	----	
Sulfur	7704-34-9	E440/CG	1000	mg/kg	<1000	<1000	<1000	----	----	
Thallium	7440-28-0	E440/CG	0.050	mg/kg	0.062	0.097	0.092	----	----	
Tin	7440-31-5	E440/CG	2.0	mg/kg	<2.0	<2.0	<2.0	----	----	
Titanium	7440-32-6	E440/CG	1.0	mg/kg	206	90.8	107	----	----	
Tungsten	7440-33-7	E440/CG	0.50	mg/kg	<0.50	<0.50	<0.50	----	----	
Uranium	7440-61-1	E440/CG	0.050	mg/kg	1.48	0.612	0.513	----	----	
Vanadium	7440-62-2	E440/CG	0.20	mg/kg	14.1	15.2	16.2	----	----	
Zinc	7440-66-6	E440/CG	2.0	mg/kg	17.7	19.6	19.3	----	----	
Zirconium	7440-67-7	E440/CG	1.0	mg/kg	4.5	2.5	2.8	----	----	
Hydrocarbons										
Chromatogram to baseline at nC50	n/a	E601.SG/CG	-	-	YES	YES	YES	----	----	
EPH (C10-C19)	----	E601A/CG	200	mg/kg	<200	<200	<200	----	----	
EPH (C19-C32)	----	E601A/CG	200	mg/kg	<200	<200	<200	----	----	
F2 (C10-C16)	----	E601.SG/CG	25	mg/kg	<25	<25	<25	----	----	
F3 (C16-C34)	----	E601.SG/CG	50	mg/kg	<50	<50	<50	----	----	
F4 (C34-C50)	----	E601.SG/CG	50	mg/kg	<50	<50	<50	----	----	
TEH (C10-C50)	n/a	E601.SG/CG	75	mg/kg	<75	<75	<75	----	----	
TEH (C16-C50)	----	E601.SG/CG	75	mg/kg	<75	<75	<75	----	----	
HEPHs	----	EC600A/CG	200	mg/kg	<200	<200	<200	----	----	
LEPHs	----	EC600A/CG	200	mg/kg	<200	<200	<200	----	----	
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (EPH surrogate)	392-83-6	E601A/CG	1.0	%	91.2	91.3	91.0	----	----	
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601.SG/CG	1.0	%	94.4	95.2	100	----	----	
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A-L/CG	0.0050	mg/kg	<0.0050	<0.0050	<0.0050	----	----	



Analytical Results

Sub-Matrix: Soil/Solid					Client sample ID	TGT-Ref-1-SG	KLK-Ref-1-SG	DUPA-SG	----	----
(Matrix: Soil/Solid)										
Client sampling date / time					09-Aug-2024 12:00	09-Aug-2024 10:00	09-Aug-2024 00:00	----	----	
Analyte	CAS Number	Method/Lab	LOR	Unit	YL2401152-001	YL2401152-002	YL2401152-003	-----	-----	
					Result	Result	Result	----	----	
Polycyclic Aromatic Hydrocarbons										
Acenaphthylene	208-96-8	E641A-L/CG	0.0050	mg/kg	<0.0050	<0.0050	<0.0050	----	----	
Acridine	260-94-6	E641A-L/CG	0.010	mg/kg	<0.010	<0.010	<0.010	----	----	
Anthracene	120-12-7	E641A-L/CG	0.0040	mg/kg	<0.0040	<0.0040	<0.0040	----	----	
Benz(a)anthracene	56-55-3	E641A-L/CG	0.010	mg/kg	<0.010	<0.010	<0.010	----	----	
Benzo(a)pyrene	50-32-8	E641A-L/CG	0.010	mg/kg	<0.010	<0.010	<0.010	----	----	
Benzo(b+j)fluoranthene	n/a	E641A-L/CG	0.010	mg/kg	<0.010	<0.010	<0.010	----	----	
Benzo(b+j+k)fluoranthene	n/a	E641A-L/CG	0.015	mg/kg	<0.015	<0.015	<0.015	----	----	
Benzo(g,h,i)perylene	191-24-2	E641A-L/CG	0.010	mg/kg	<0.010	<0.010	<0.010	----	----	
Benzo(k)fluoranthene	207-08-9	E641A-L/CG	0.010	mg/kg	<0.010	<0.010	<0.010	----	----	
Chrysene	218-01-9	E641A-L/CG	0.010	mg/kg	<0.010	<0.010	<0.010	----	----	
Dibenz(a,h)anthracene	53-70-3	E641A-L/CG	0.0050	mg/kg	<0.0050	<0.0050	<0.0050	----	----	
Fluoranthene	206-44-0	E641A-L/CG	0.010	mg/kg	<0.010	<0.010	<0.010	----	----	
Fluorene	86-73-7	E641A-L/CG	0.010	mg/kg	<0.010	<0.010	<0.010	----	----	
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L/CG	0.010	mg/kg	<0.010	<0.010	<0.010	----	----	
Methylnaphthalene, 1-	90-12-0	E641A-L/CG	0.010	mg/kg	<0.010	<0.010	<0.010	----	----	
Methylnaphthalene, 2-	91-57-6	E641A-L/CG	0.010	mg/kg	<0.010	<0.010	<0.010	----	----	
Naphthalene	91-20-3	E641A-L/CG	0.010	mg/kg	<0.010	<0.010	<0.010	----	----	
Phenanthrene	85-01-8	E641A-L/CG	0.010	mg/kg	<0.010	<0.010	<0.010	----	----	
Pyrene	129-00-0	E641A-L/CG	0.010	mg/kg	<0.010	<0.010	<0.010	----	----	
Quinoline	91-22-5	E641A-L/CG	0.010	mg/kg	<0.010	<0.010	<0.010	----	----	
B(a)P total potency equivalents [B(a)P TPE]	----	E641A-L/CG	0.020	mg/kg	<0.020	<0.020	<0.020	----	----	
IACR (CCME)	----	E641A-L/CG	0.150	-	<0.150	<0.150	<0.150	----	----	
Polycyclic Aromatic Hydrocarbons Surrogates										
Acridine-d9	34749-75-2	E641A-L/CG	0.1	%	94.3	94.1	93.3	----	----	
Chrysene-d12	1719-03-5	E641A-L/CG	0.1	%	89.4	94.4	87.1	----	----	
Naphthalene-d8	1146-65-2	E641A-L/CG	0.1	%	87.1	92.2	84.8	----	----	
Phenanthrene-d10	1517-22-2	E641A-L/CG	0.1	%	99.0	98.6	95.6	----	----	

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

Please refer to the Accreditation section for an explanation of analyte accreditations.



Page : 7 of 7  
Work Order : YL2401152  
Client : WSP Canada Inc.  
Project : CA0026317.6821/86000/03

---



---

## QUALITY CONTROL INTERPRETIVE REPORT

---

Work Order	: YL2401152	Page	: 1 of 13
Client	: WSP Canada Inc.	Laboratory	: ALS Environmental - Yellowknife
Contact	: Adrienne Ducharme	Account Manager	: Amber Springer
Address	: 840 Howe St, 10th Floor Vancouver BC Canada V6Z 2S9	Address	: 314 Old Airport Road, Unit 116 Yellowknife, Northwest Territories Canada X1A 3T3
Telephone	: ----	Telephone	: +1 867 873 5593
Project	: CA0026317.6821/86000/03	Date Samples Received	: 12-Aug-2024 11:24
PO	: ----	Issue Date	: 20-Aug-2024 09:45
C-O-C number	: ----		
Sampler	: ----		
Site	: Baffinland Milne Port		
Quote number	: VA24-GOLD100-011		
No. of samples received	: 3		
No. of samples analysed	: 3		

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

### Key

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

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

DQO: Data Quality Objective.

LOR: Limit of Reporting (detection limit).

RPD: Relative Percent Difference.

---

### Workorder Comments

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

### Summary of Outliers

#### Outliers : Quality Control Samples

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

#### Outliers: Reference Material (RM) Samples

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

### ***Outliers : Analysis Holding Time Compliance (Breaches)***

- No Analysis Holding Time Outliers exist.

### ***Outliers : Frequency of Quality Control Samples***

- No Quality Control Sample Frequency Outliers occur.



Matrix: Soil/Solid

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Reference Material (RM) Sample								
Metals	QC-MRG2-1602984 003	----	Uranium	7440-61-1	E440	69.5 % MES	70.0-130%	Recovery less than lower control limit

Result Qualifiers

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



## Analysis Holding Time Compliance

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

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

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

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

Matrix: **Soil/Solid**

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

Analyte Group : Analytical Method	Method	Sampling Date	Extraction / Preparation				Analysis			
Container / Client Sample ID(s)			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Hydrocarbons : BC PHCs - EPH by GC-FID										
Glass soil jar/Teflon lined cap DUPA-SG	E601A	09-Aug-2024	15-Aug-2024	14 days	6 days	✓	16-Aug-2024	40 days	1 days	✓
Hydrocarbons : BC PHCs - EPH by GC-FID										
Glass soil jar/Teflon lined cap KLK-Ref-1-SG	E601A	09-Aug-2024	15-Aug-2024	14 days	6 days	✓	16-Aug-2024	40 days	1 days	✓
Hydrocarbons : BC PHCs - EPH by GC-FID										
Glass soil jar/Teflon lined cap TGT-Ref-1-SG	E601A	09-Aug-2024	15-Aug-2024	14 days	6 days	✓	16-Aug-2024	40 days	1 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Glass soil jar/Teflon lined cap DUPA-SG	E601.SG	09-Aug-2024	15-Aug-2024	14 days	6 days	✓	16-Aug-2024	40 days	1 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Glass soil jar/Teflon lined cap KLK-Ref-1-SG	E601.SG	09-Aug-2024	15-Aug-2024	14 days	6 days	✓	16-Aug-2024	40 days	1 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Glass soil jar/Teflon lined cap TGT-Ref-1-SG	E601.SG	09-Aug-2024	15-Aug-2024	14 days	6 days	✓	16-Aug-2024	40 days	1 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap DUPA-SG	E510	09-Aug-2024	18-Aug-2024	28 days	9 days	✓	19-Aug-2024	28 days	10 days	✓



Matrix: Soil/Solid

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

Analyte Group : Analytical Method	Method	Sampling Date	Extraction / Preparation				Analysis			
Container / Client Sample ID(s)			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap KLK-Ref-1-SG	E510	09-Aug-2024	18-Aug-2024	28 days	9 days	✓	19-Aug-2024	28 days	10 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
Glass soil jar/Teflon lined cap TGT-Ref-1-SG	E510	09-Aug-2024	18-Aug-2024	28 days	9 days	✓	19-Aug-2024	28 days	10 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap DUPA-SG	E440	09-Aug-2024	18-Aug-2024	180 days	9 days	✓	19-Aug-2024	180 days	10 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap KLK-Ref-1-SG	E440	09-Aug-2024	18-Aug-2024	180 days	9 days	✓	19-Aug-2024	180 days	10 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
Glass soil jar/Teflon lined cap TGT-Ref-1-SG	E440	09-Aug-2024	18-Aug-2024	180 days	9 days	✓	19-Aug-2024	180 days	10 days	✓
Organic / Inorganic Carbon : Total Carbon by Combustion										
LDPE bag DUPA-SG	E351	09-Aug-2024	16-Aug-2024	----	----		16-Aug-2024	0 days	0 days	✓
Organic / Inorganic Carbon : Total Carbon by Combustion										
LDPE bag KLK-Ref-1-SG	E351	09-Aug-2024	16-Aug-2024	----	----		16-Aug-2024	0 days	0 days	✓
Organic / Inorganic Carbon : Total Carbon by Combustion										
LDPE bag TGT-Ref-1-SG	E351	09-Aug-2024	16-Aug-2024	----	----		16-Aug-2024	0 days	0 days	✓
Organic / Inorganic Carbon : Total Inorganic Carbon by Acetic Acid pH Standard Curve										
LDPE bag DUPA-SG	E354	09-Aug-2024	----	----	----		16-Aug-2024	----	7 days	



Matrix: Soil/Solid

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

Analyte Group : Analytical Method	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Organic / Inorganic Carbon : Total Inorganic Carbon by Acetic Acid pH Standard Curve										
LDPE bag KLK-Ref-1-SG	E354	09-Aug-2024	----	----	----		16-Aug-2024	----	7 days	
Organic / Inorganic Carbon : Total Inorganic Carbon by Acetic Acid pH Standard Curve										
LDPE bag TGT-Ref-1-SG	E354	09-Aug-2024	----	----	----		16-Aug-2024	----	7 days	
Percent Passing : Particle Size Analysis - Pipette Method										
LDPE bag DUPA-SG	E184	09-Aug-2024	19-Aug-2024	365 days	10 days	✓	19-Aug-2024	365 days	10 days	✓
Percent Passing : Particle Size Analysis - Pipette Method										
LDPE bag KLK-Ref-1-SG	E184	09-Aug-2024	19-Aug-2024	365 days	10 days	✓	19-Aug-2024	365 days	10 days	✓
Percent Passing : Particle Size Analysis - Pipette Method										
LDPE bag TGT-Ref-1-SG	E184	09-Aug-2024	19-Aug-2024	365 days	10 days	✓	19-Aug-2024	365 days	10 days	✓
Percent Passing : Particle Size Analysis - Sieve <2mm										
LDPE bag DUPA-SG	E182	09-Aug-2024	19-Aug-2024	365 days	10 days	✓	19-Aug-2024	365 days	10 days	✓
Percent Passing : Particle Size Analysis - Sieve <2mm										
LDPE bag KLK-Ref-1-SG	E182	09-Aug-2024	19-Aug-2024	365 days	10 days	✓	19-Aug-2024	365 days	10 days	✓
Percent Passing : Particle Size Analysis - Sieve <2mm										
LDPE bag TGT-Ref-1-SG	E182	09-Aug-2024	19-Aug-2024	365 days	10 days	✓	19-Aug-2024	365 days	10 days	✓
Percent Passing : Particle Size Analysis - Sieve >2mm										
LDPE bag DUPA-SG	E181	09-Aug-2024	19-Aug-2024	365 days	10 days	✓	19-Aug-2024	365 days	10 days	✓



Matrix: Soil/Solid

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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Percent Passing : Particle Size Analysis - Sieve >2mm										
LDPE bag KLK-Ref-1-SG	E181	09-Aug-2024	19-Aug-2024	365 days	10 days	✓	19-Aug-2024	365 days	10 days	✓
Percent Passing : Particle Size Analysis - Sieve >2mm										
LDPE bag TGT-Ref-1-SG	E181	09-Aug-2024	19-Aug-2024	365 days	10 days	✓	19-Aug-2024	365 days	10 days	✓
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap DUPA-SG	E144	09-Aug-2024	----	----	----		15-Aug-2024	----	6 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap KLK-Ref-1-SG	E144	09-Aug-2024	----	----	----		15-Aug-2024	----	6 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap TGT-Ref-1-SG	E144	09-Aug-2024	----	----	----		15-Aug-2024	----	6 days	
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
Glass soil jar/Teflon lined cap DUPA-SG	E108	09-Aug-2024	19-Aug-2024	30 days	10 days	✓	19-Aug-2024	30 days	10 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
Glass soil jar/Teflon lined cap KLK-Ref-1-SG	E108	09-Aug-2024	19-Aug-2024	30 days	10 days	✓	19-Aug-2024	30 days	10 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
Glass soil jar/Teflon lined cap TGT-Ref-1-SG	E108	09-Aug-2024	19-Aug-2024	30 days	10 days	✓	19-Aug-2024	30 days	10 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)										
Glass soil jar/Teflon lined cap DUPA-SG	E641A-L	09-Aug-2024	15-Aug-2024	14 days	6 days	✓	16-Aug-2024	40 days	1 days	✓



Page : 8 of 13  
 Work Order : YL2401152  
 Client : WSP Canada Inc.  
 Project : CA0026317.6821/86000/03



Matrix: **Soil/Solid**

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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)										
Glass soil jar/Teflon lined cap KLK-Ref-1-SG	E641A-L	09-Aug-2024	15-Aug-2024	14 days	6 days	✓	16-Aug-2024	40 days	1 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)										
Glass soil jar/Teflon lined cap TGT-Ref-1-SG	E641A-L	09-Aug-2024	15-Aug-2024	14 days	6 days	✓	16-Aug-2024	40 days	1 days	✓

Legend & Qualifier Definitions

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



## Quality Control Parameter Frequency Compliance

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

Matrix: **Soil/Solid**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Laboratory Duplicates (DUP)							
BC PHCs - EPH by GC-FID	E601A	1597849	1	14	7.1	5.0	✓
CCME PHCs - F2-F4 by GC-FID	E601.SG	1597847	1	6	16.6	5.0	✓
Mercury in Soil/Solid by CVAAS	E510	1602984	1	20	5.0	5.0	✓
Metals in Soil/Solid by CRC ICPMS	E440	1602985	1	20	5.0	5.0	✓
Moisture Content by Gravimetry	E144	1597851	1	20	5.0	5.0	✓
PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)	E641A-L	1597848	1	14	7.1	5.0	✓
Particle Size Analysis - Pipette Method	E184	1599810	1	17	5.8	5.0	✓
Particle Size Analysis - Sieve <2mm	E182	1599812	1	17	5.8	5.0	✓
pH by Meter (1:2 Soil:Water Extraction)	E108	1604483	1	17	5.8	5.0	✓
Total Carbon by Combustion	E351	1600140	1	20	5.0	5.0	✓
Total Inorganic Carbon by Acetic Acid pH Standard Curve	E354	1599758	1	20	5.0	5.0	✓
Laboratory Control Samples (LCS)							
BC PHCs - EPH by GC-FID	E601A	1597849	1	14	7.1	5.0	✓
CCME PHCs - F2-F4 by GC-FID	E601.SG	1597847	1	6	16.6	5.0	✓
Mercury in Soil/Solid by CVAAS	E510	1602984	2	20	10.0	10.0	✓
Metals in Soil/Solid by CRC ICPMS	E440	1602985	2	20	10.0	10.0	✓
Moisture Content by Gravimetry	E144	1597851	1	20	5.0	5.0	✓
PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)	E641A-L	1597848	1	14	7.1	5.0	✓
Particle Size Analysis - Pipette Method	E184	1599810	1	17	5.8	5.0	✓
Particle Size Analysis - Sieve <2mm	E182	1599812	1	17	5.8	5.0	✓
Particle Size Analysis - Sieve >2mm	E181	1599811	1	17	5.8	5.0	✓
pH by Meter (1:2 Soil:Water Extraction)	E108	1604483	2	17	11.7	10.0	✓
Total Carbon by Combustion	E351	1600140	2	20	10.0	10.0	✓
Total Inorganic Carbon by Acetic Acid pH Standard Curve	E354	1599758	2	20	10.0	10.0	✓
Method Blanks (MB)							
BC PHCs - EPH by GC-FID	E601A	1597849	1	14	7.1	5.0	✓
CCME PHCs - F2-F4 by GC-FID	E601.SG	1597847	1	6	16.6	5.0	✓
Mercury in Soil/Solid by CVAAS	E510	1602984	1	20	5.0	5.0	✓
Metals in Soil/Solid by CRC ICPMS	E440	1602985	1	20	5.0	5.0	✓
Moisture Content by Gravimetry	E144	1597851	1	20	5.0	5.0	✓
PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)	E641A-L	1597848	1	14	7.1	5.0	✓
Total Carbon by Combustion	E351	1600140	1	20	5.0	5.0	✓
Total Inorganic Carbon by Acetic Acid pH Standard Curve	E354	1599758	1	20	5.0	5.0	✓
Matrix Spikes (MS)							
BC PHCs - EPH by GC-FID	E601A	1597849	1	14	7.1	5.0	✓

Page : 10 of 13  
 Work Order : YL2401152  
 Client : WSP Canada Inc.  
 Project : CA0026317.6821/86000/03



Matrix: **Soil/Solid**

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

Quality Control Sample Type			Count		Frequency (%)		
	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
<i>Analytical Methods</i>							
Matrix Spikes (MS) - Continued							
CCME PHCs - F2-F4 by GC-FID	E601.SG	1597847	1	6	16.6	5.0	✔
PAHs in Soil/solid by Hex: Ace GC-MS (Low Level CCME)	E641A-L	1597848	1	14	7.1	5.0	✔



## Methodology References and Summaries

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

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
pH by Meter (1:2 Soil:Water Extraction)	E108  ALS Environmental - Calgary	Soil/Solid	BC Lab Manual	pH is determined by potentiometric measurement with a pH electrode at ambient laboratory temperature (normally $20 \pm 5^{\circ}\text{C}$ ), and is carried out in accordance with procedures described in the BC Lab Manual (prescriptive method). The procedure involves mixing the dried (at $<60^{\circ}\text{C}$ ) and sieved (10mesh/2mm) sample with ultra pure water at a 1:2 ratio of sediment to water. The pH is then measured by a standard pH probe.
Moisture Content by Gravimetry	E144  ALS Environmental - Calgary	Soil/Solid	CCME PHC in Soil - Tier 1	Moisture is measured gravimetrically by drying the sample at $105^{\circ}\text{C}$ . Moisture content is calculated as the weight loss (due to water) divided by the wet weight of the sample, expressed as a percentage.
Particle Size Analysis - Sieve >2mm	E181  ALS Environmental - Saskatoon	Soil/Solid	ASTM D6913-17 (mod)	Soil samples are disaggregated and sieved through a 2mm sieve. Material retained on the sieve is then further sieved through a series of sieves. The amount passing through the sieves is measured gravimetrically.
Particle Size Analysis - Sieve <2mm	E182  ALS Environmental - Saskatoon	Soil/Solid	ASTM D6913-17 (mod)	Soil samples are disaggregated and sieved through a 2mm sieve. Material passed through the sieve is then further disaggregated using calgon solution and passed through a series of sieves. The amount passing through the sieves is measured gravimetrically.
Particle Size Analysis - Pipette Method	E184  ALS Environmental - Saskatoon	Soil/Solid	SSIR-51 Method 3.2.1	Soil material is separated from coarse material (>2mm). A specimen is then disaggregated through mixing with Calgon solution. The material is then suspended in solution wherein regular aliquots are taken using a mechanical pipette at specific time intervals. The aliquots are dried and material in suspension determined gravimetrically. The principles of Stokes' Law are applied to determine the amount of material remaining in solution as well as the maximum particle size remaining in solution at the specified time.
Total Carbon by Combustion	E351  ALS Environmental - Saskatoon	Soil/Solid	CSSS (2008) 21.2 (mod)	Total Carbon is determined by the high temperature combustion method with measurement by an infrared detector.
Total Inorganic Carbon by Acetic Acid pH Standard Curve	E354  ALS Environmental - Saskatoon	Soil/Solid	CSSS (2008) 20.2	Total Inorganic Carbon is determined by acetic acid pH standard curve, where a known quantity of acetic acid is consumed by reaction with carbonates in the soil. The pH of the resulting solution is measured and compared against a standard curve relating pH to weight of carbonate.



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Metals in Soil/Solid by CRC ICPMS	E440  ALS Environmental - Calgary	Soil/Solid	EPA 6020B (mod)	<p>This method is intended to liberate metals that may be environmentally available. Samples are dried, then sieved through a 2 mm sieve, and digested with HNO<sub>3</sub> and HCl.</p> <p>Dependent on sample matrix, some metals may be only partially recovered, including Al, Ba, Be, Cr, Sr, Ti, Tl, V, W, and Zr. Silicate minerals are not solubilized. Volatile forms of sulfur (including sulfide) may not be captured, as they may be lost during sampling, storage, or digestion. This method does not adequately recover elemental sulfur, and is unsuitable for assessment of elemental sulfur standards or guidelines.</p> <p>Analysis is by Collision/Reaction Cell ICPMS.</p>
Mercury in Soil/Solid by CVAAS	E510  ALS Environmental - Calgary	Soil/Solid	EPA 200.2/1631 Appendix (mod)	<p>Samples are dried, then sieved through a 2 mm sieve, and digested with HNO<sub>3</sub> and HCl, followed by CVAAS analysis.</p>
CCME PHCs - F2-F4 by GC-FID	E601.SG  ALS Environmental - Calgary	Soil/Solid	CCME PHC in Soil - Tier 1	<p>Sample extracts are subjected to in-situ silica gel treatment prior to analysis by GC-FID for CCME hydrocarbon fractions (F2-F4).</p> <p>Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Test results are expressed on a dry weight basis. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.</p>
BC PHCs - EPH by GC-FID	E601A  ALS Environmental - Calgary	Soil/Solid	BC MOE Lab Manual (EPH in Solids by GC/FID) (mod)	<p>Sample extracts are analyzed by GC-FID for BC hydrocarbon fractions.</p>
PAHs in Soil/solid by Hex:Ace GC-MS (Low Level CCME)	E641A-L  ALS Environmental - Calgary	Soil/Solid	EPA 8270E (mod)	<p>Polycyclic Aromatic Hydrocarbons (PAHs) are extracted with hexane/acetone and analyzed by GC-MS. If reported, IACR (index of additive cancer risk, unitless) and B(a)P toxic potency equivalent (in soil concentration units) are calculated as per CCME PAH Soil Quality Guidelines fact sheet (2010) or ABT1.</p>
Particle Size Analysis (Pipette) - MMER Classification	EC184E  ALS Environmental - Saskatoon	Soil/Solid	Metal Mining Technical Guidance for Environmental Effects Monitoring (2012)	<p>The particle size determination is performed by various methods to generate a Grain Size curve. The data from the curve is then used to produce particle size ranges based on the Metal Mining Effluent Regulations (MMER) classification system for Environmental Effects Monitoring.</p>
Total Organic Carbon (Calculated) in soil	EC356  ALS Environmental - Saskatoon	Soil/Solid	CSSS (2008) 21.2	<p>Total Organic Carbon (TOC) is calculated by the difference between total carbon (TC) and total inorganic carbon (TIC).</p>
LEPH and HEPH: EPH-PAH	EC600A  ALS Environmental - Calgary	Soil/Solid	BC MOE Lab Manual (LEPH and HEPH)	<p>Light Extractable Petroleum Hydrocarbons (LEPH) and Heavy Extractable Petroleum Hydrocarbons (HEPH) are calculated as follows: LEPH = Extractable Petroleum Hydrocarbons (EPH10-19) minus Naphthalene and Phenanthrene; HEPH = Extractable Petroleum Hydrocarbons (EPH19-32) minus Benz(a)anthracene, Benzo(b+j)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Dibenz(a,h)anthracene, Indeno(1,2,3-cd)pyrene, and Pyrene.</p>