SWCRR Wetland 06 - Fall 2024 Monitoring Data Results

Project 102601-01
Report To Ausenco Sustainability Inc.
Bureau Veritas Job No. C487432

ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		CYZ882		CYZ883		CYZ884			CYZ885		CYZ886			CYZ887			CYZ888		
Sampling Date		2024/10/29 09:15		2024/10/29 09:50		2024/10/29 10:20			2024/10/29 11:15		2024/10/29 11:30			2024/10/29 11:45			2024/10/29 12:20		
COC Number		740516-02-01		740516-02-01		740516-02-01			740516-02-01		740516-02-01			740516-02-01			740516-02-01		
	UNITS	**WQ-05B**	**RDL**	**WQ-04B**	**QC Batch**	**WQ-04A**	**RDL**	**QC Batch**	**WQ-07**	**QC Batch**	**WQ-06**	**RDL**	**QC Batch**	**WQ-04C**	**RDL**	**QC Batch**	**WQ-03**	**RDL**	**QC Batch**
Calculated Parameters																			
Anion Sum	meq/L	14	N/A	11	8585348	8.9	N/A	8585348	9.9	8585348	10	N/A	8585348	9.8	N/A	8585348	10	N/A	8585348
Cation Sum	meq/L	14	N/A	12	8585348	9.4	N/A	8585348	9.6	8585348	11	N/A	8585348	10	N/A	8585348	29	N/A	8585348
Hardness (CaCO3)	mg/L	590	0.50	460	8585344	370	0.50	8585344	380	8585344	420	0.50	8585557	410	0.50	8585557	1300	0.50	8585557
Ion Balance (% Difference)	%	0.93	N/A	1.6	8585346	2.3	N/A	8585346	1.5	8585346	3.7	N/A	8585346	2.8	N/A	8585346	2.3	N/A	8585559
Nitrate (N)	mg/L	0.12	0.010	0.72	8585141	0.63	0.010	8585141	<0.050	8585141	<0.050	0.050	8585141	0.012	0.010	8585141	<0.050	0.050	8585141
Nitrate (NO3)	mg/L	0.55	0.044	3.2	8585086	2.8	0.044	8585086	<0.22	8585086	<0.22	0.22	8585086	0.053	0.044	8585086	<0.22	0.22	8585561
Nitrite (NO2)	mg/L	<0.033	0.033	<0.033	8585086	<0.033	0.033	8585086	<0.033	8585086	<0.033	0.033	8585086	<0.033	0.033	8585086	<0.033	0.033	8585561
Calculated Total Dissolved Solids	mg/L	700	10	580	8585357	460	10	8585357	500	8585357	520	10	8585357	500	10	8585357	1800	25	8585357
Elements																			
Dissolved Cadmium (Cd)	mg/L	<0.000020	0.000020	<0.000020	8585340	<0.000020	0.000020	8585340	<0.000020	8585340	<0.000020	0.000020	8585340	<0.000020	0.000020	8585340	<0.000020	0.000020	8585340
Misc. Inorganics																			
Conductivity	uS/cm	1100	2.0	1000	8586767	780	2.0	8586767	860	8586767	880	2.0	8586767	840	2.0	8586767	2200	2.0	8586767
pH	pH	7.92	N/A	8.16	8586766	7.93	N/A	8586766	8.30	8586766	8.21	N/A	8586766	8.40	N/A	8586766	7.78	N/A	8586766
Anions																			
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	<1.0	8586764	<1.0	1.0	8586764	<1.0	8586764	<1.0	1.0	8586764	6.7	1.0	8586764	<1.0	1.0	8586764
Alkalinity (Total as CaCO3)	mg/L	450	1.0	350	8586764	380	1.0	8586764	390	8586764	390	1.0	8586764	400	1.0	8586764	500	1.0	8586764
Bicarbonate (HCO3)	mg/L	550	1.0	420	8586764	460	1.0	8586764	470	8586764	480	1.0	8586764	470	1.0	8586764	610	1.0	8586764
Carbonate (CO3)	mg/L	<1.0	1.0	<1.0	8586764	<1.0	1.0	8586764	<1.0	8586764	<1.0	1.0	8586764	8.1	1.0	8586764	<1.0	1.0	8586764
Hydroxide (OH)	mg/L	<1.0	1.0	<1.0	8586764	<1.0	1.0	8586764	<1.0	8586764	<1.0	1.0	8586764	<1.0	1.0	8586764	<1.0	1.0	8586764
Chloride (Cl)	mg/L	37	1.0	110	8586714	8.2	1.0	8586714	21	8586714	22	1.0	8586714	19	1.0	8586714	31	1.0	8586714
Sulphate (SO4)	mg/L	170	5.0	96	8586714	52	1.0	8586714	75	8586714	77	1.0	8586714	64	1.0	8586714	930	25	8586714
Nutrients																			
Nitrite (N)	mg/L	<0.010	0.010	<0.010	8587007	<0.010	0.010	8587007	<0.010	8587007	<0.010	0.010	8587007	<0.010	0.010	8587007	<0.010	0.010	8587007
Nitrate plus Nitrite (N)	mg/L	0.12	0.010	0.72	8587007	0.63	0.010	8587007	<0.050 (1)	8587007	<0.050 (1)	0.050	8587007	0.012	0.010	8587007	<0.050 (1)	0.050	8587007
Elements																			
Dissolved Aluminum (Al)	mg/L	<0.0030	0.0030	0.012	8588568	<0.0030	0.0030	8588568	0.0041	8588568	0.0058	0.0030	8588568	0.0044	0.0030	8588517	0.0038	0.0030	8588568
Dissolved Antimony (Sb)	mg/L	<0.00060	0.00060	<0.00060	8588568	<0.00060	0.00060	8588568	<0.00060	8588568	<0.00060	0.00060	8588568	<0.00060	0.00060	8588517	<0.00060	0.00060	8588568
Dissolved Arsenic (As)	mg/L	0.00049	0.00020	<0.00020	8588568	<0.00020	0.00020	8588568	0.00048	8588568	0.00060	0.00020	8588568	0.00039	0.00020	8588517	0.0025	0.00020	8588568
Dissolved Barium (Ba)	mg/L	0.12	0.010	0.072	8591327	0.067	0.010	8588100	0.092	8591327	0.10	0.010	8588100	0.077	0.010	8588100	0.092	0.010	8588100
Dissolved Beryllium (Be)	mg/L	<0.0010	0.0010	<0.0010	8588568	<0.0010	0.0010	8588568	<0.0010	8588568	<0.0010	0.0010	8588568	<0.0010	0.0010	8588517	<0.0010	0.0010	8588568
Dissolved Boron (B)	mg/L	0.046	0.020	0.065	8591327	0.048	0.020	8588100	0.050	8591327	0.040	0.020	8588100	0.041	0.020	8588100	0.064	0.020	8588100
Dissolved Calcium (Ca)	mg/L	100	0.30	96	8591327	76	0.30	8588100	63	8591327	72	0.30	8588100	72	0.30	8588100	290	0.30	8588100
Dissolved Chromium (Cr)	mg/L	<0.0010	0.0010	<0.0010	8588568	<0.0010	0.0010	8588568	<0.0010	8588568	<0.0010	0.0010	8588568	<0.0010	0.0010	8588517	<0.0010	0.0010	8588568
Dissolved Cobalt (Co)	mg/L	<0.00030	0.00030	<0.00030	8588568	<0.00030	0.00030	8588568	<0.00030	8588568	<0.00030	0.00030	8588568	<0.00030	0.00030	8588517	0.0021	0.00030	8588568
Dissolved Copper (Cu)	mg/L	<0.0010	0.0010	0.0013	8588568	0.0018	0.0010	8588568	<0.0010	8588568	<0.0010	0.0010	8588568	<0.0010	0.0010	8588517	<0.0010	0.0010	8588568
Dissolved Iron (Fe)	mg/L	<0.060	0.060	<0.060	8591327	<0.060	0.060	8588100	<0.060	8591327	<0.060	0.060	8588100	<0.060	0.060	8588100	0.29	0.060	8588100
Dissolved Lead (Pb)	mg/L	<0.00020	0.00020	<0.00020	8588568	<0.00020	0.00020	8588568	0.00021	8588568	<0.00020	0.00020	8588568	<0.00020	0.00020	8588517	<0.00020	0.00020	8588568
Dissolved Lithium (Li)	mg/L	0.024	0.020	0.029	8591327	0.022	0.020	8588100	<0.020	8591327	0.023	0.020	8588100	0.023	0.020	8588100	0.036	0.020	8588100
Dissolved Magnesium (Mg)	mg/L	83	0.20	54	8591327	43	0.20	8588100	53	8591327	59	0.20	8588100	55	0.20	8588100	140	0.20	8588100
Dissolved Manganese (Mn)	mg/L	0.035	0.0040	<0.0040	8591327	<0.0040	0.0040	8588100	0.0050	8591327	0.011	0.0040	8588100	<0.0040	0.0040	8588100	1.3	0.0040	8588100
Dissolved Molybdenum (Mo)	mg/L	0.0019	0.00020	0.0015	8588568	0.0025	0.00020	8588568	0.0022	8588568	0.0020	0.00020	8588568	0.0023	0.00020	8588517	0.0036	0.00020	8588568
Dissolved Nickel (Ni)	mg/L	0.00074	0.00050	<0.00050	8588568	<0.00050	0.00050	8588568	0.00052	8588568	0.00073	0.00050	8588568	<0.00050	0.00050	8588517	0.0035	0.00050	8588568
Dissolved Phosphorus (P)	mg/L	<0.10	0.10	<0.10	8591327	<0.10	0.10	8588100	<0.10	8591327	<0.10	0.10	8588100	<0.10	0.10	8588100	<0.10	0.10	8588100
Dissolved Potassium (K)	mg/L	4.3	0.30	5.1	8591327	4.1	0.30	8588100	3.7	8591327	4.2	0.30	8588100	4.0	0.30	8588100	20	0.30	8588100
Dissolved Selenium (Se)	mg/L	0.0030	0.00020	0.0017	8588568	0.0019	0.00020	8588568	0.00048	8588568	0.00048	0.00020	8588568	0.00079	0.00020	8588517	0.00039	0.00020	8588568
Dissolved Silicon (Si)	mg/L	4.2	0.50	3.7	8591327	4.7	0.50	8588100	3.0	8591327	3.1	0.50	8588100	5.3	0.50	8588100	1.8	0.50	8588100
Dissolved Silver (Ag)	mg/L	<0.00010	0.00010	<0.00010	8588568	<0.00010	0.00010	8588568	<0.00010	8588568	<0.00010	0.00010	8588568	<0.00010	0.00010	8588517	<0.00010	0.00010	8588568
Dissolved Sodium (Na)	mg/L	42	0.50	50	8591327	44	0.50	8588100	46	8591327	51	0.50	8588100	49	0.50	8588100	52	0.50	8588100
Dissolved Strontium (Sr)	mg/L	0.87	0.020	0.98	8591327	0.70	0.020	8588100	0.73	8591327	0.75	0.020	8588100	0.74	0.020	8588100	1.6	0.020	8588100
Dissolved Sulphur (S)	mg/L	59	0.20	19	8591327	19	0.20	8588100	27	8591327	28	0.20	8588100	24	0.20	8588100	280	0.20	8588100
Dissolved Thallium (Tl)	mg/L	<0.00020	0.00020	<0.00020	8588568	<0.00020	0.00020	8588568	<0.00020	8588568	<0.00020	0.00020	8588568	<0.00020	0.00020	8588517	<0.00020	0.00020	8588568
Dissolved Tin (Sn)	mg/L	<0.0010	0.0010	<0.0010	8588568	<0.0010	0.0010	8588568	<0.0010	8588568	<0.0010	0.0010	8588568	<0.0010	0.0010	8588517	<0.0010	0.0010	8588568
Dissolved Titanium (Ti)	mg/L	<0.0010	0.0010	<0.0010	8588568	<0.0010	0.0010	8588568	<0.0010	8588568	<0.0010	0.0010	8588568	<0.0010	0.0010	8588517	<0.0010	0.0010	8588568
Dissolved Uranium (U)	mg/L	0.011	0.00010	0.0038	8588568	0.0042	0.00010	8588568	0.0047	8588568	0.0044	0.00010	8588568	0.0048	0.00010	8588517	0.019	0.00010	8588568
Dissolved Vanadium (V)	mg/L	<0.0010	0.0010	<0.0010	8588568	<0.0010	0.0010	8588568	<0.0010	8588568	<0.0010	0.0010	8588568	<0.0010	0.0010	8588517	<0.0010	0.0010	8588568
Dissolved Zinc (Zn)	mg/L	<0.0030	0.0030	<0.0030	8588568	<0.0030	0.0030	8588568	<0.0030	8588568	<0.0030	0.0030	8588568	0.0043	0.0030	8588517	<0.0030	0.0030	8588568

TOTAL KJELDAHL NITROGEN (TOTAL)

Bureau Veritas ID		CYZ882	CYZ883		CYZ884			CYZ885		CYZ886			CYZ887		CYZ888		
Sampling Date		2024/10/29 09:15	2024/10/29 09:50		2024/10/29 10:20			2024/10/29 11:15		2024/10/29 11:30			2024/10/29 11:45		2024/10/29 12:20		
COC Number		740516-02-01	740516-02-01		740516-02-01			740516-02-01		740516-02-01			740516-02-01		740516-02-01		
	UNITS	**WQ-05B**	**WQ-04B**	**QC Batch**	**WQ-04A**	**RDL**	**QC Batch**	**WQ-07**	**QC Batch**	**WQ-06**	**RDL**	**QC Batch**	**WQ-04C**	**RDL**	**WQ-03**	**RDL**	**QC Batch**
Calculated Parameters																	
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.58	0.40	8584116	<0.020	0.020	8584116	0.42	8584116	0.39	0.050	8585563	0.30	0.020	2.1	0.20	8585563
Nutrients																	
Total Nitrogen (N)	mg/L	0.70	1.1	8588217	0.63 (1)	0.020	8588228	0.42	8588217	0.39	0.020	8588228	0.31	0.020	2.1 (2)	0.20	8588217

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		CYZ882		CYZ883		CYZ884			CYZ885		CYZ886			CYZ887			CYZ888		
Sampling Date		2024/10/29 09:15		2024/10/29 09:50		2024/10/29 10:20			2024/10/29 11:15		2024/10/29 11:30			2024/10/29 11:45			2024/10/29 12:20		
COC Number		740516-02-01		740516-02-01		740516-02-01			740516-02-01		740516-02-01			740516-02-01			740516-02-01		
	UNITS	**WQ-05B**	**QC Batch**	**WQ-04B**	**QC Batch**	**WQ-04A**	**QC Batch**	**RDL**	**WQ-07**	**QC Batch**	**WQ-06**	**QC Batch**	**RDL**	**WQ-04C**	**RDL**	**QC Batch**	**WQ-03**	**RDL**	**QC Batch**
Demand Parameters																			
Biochemical Oxygen Demand	mg/L	4.4	8585751	<2.0	8585751	<2.0	8585751	<2.0	<2.0	8585751	<2.0	8585751	2.0	<2.0	2.0	8585751	5.0	2.0	8585751
Chemical Oxygen Demand	mg/L	19	8590463	<10	8590463	10	8590463	16	16	8590463	13	8590463	12	10	8590463	62	10	8590463
Misc. Inorganics																			
Dissolved Oxygen (O2)	mg/L	8.0	8586351	12	8586351	3.6	8586351	8.6	8.6	8586351	6.2	8586351	5.2	0.10	8586351	1.8	0.10	8586351
Total Dissolved Solids	mg/L	700	8585648	590	8585648	440	8585648	500	500	8585648	510	8585648	490	10	8585648	1800	10	8585648
Total Suspended Solids	mg/L	98	8585634	16	8585634	290	8585634	86	86	8585634	57	8585634	18	1.0	8585634	3500 (1)	5.0	8585634
Nutrients																			
Total Ammonia (N)	mg/L	<0.015	8588923	<0.015	8588918	<0.015	8588918	<0.015	<0.015	8588918	<0.015	8588918	<0.015	0.015	8588121	0.25	0.015	8588918
Orthophosphate (P)	mg/L	<0.0030	8586706	<0.0030	8586706	<0.0030	8586706	<0.0030	<0.0030	8594258	<0.0030	8586706	<0.0030	0.0030	8586706	<0.0030	0.0030	8586706
Dissolved Phosphorus (P)	mg/L	<0.0030	8589393	<0.0030	8589393	<0.0030	8587676	<0.0030	<0.0030	8589393	<0.0030	8589393	<0.0030	0.0030	8589393	0.012	0.0030	8587676
Total Phosphorus (P)	mg/L	0.015	8587654	0.018	8587654	0.0049	8587654	0.0096	0.0096	8587654	0.0063	8587654	<0.0030	0.0030	8587654	0.13 (2)	0.030	8587654
Physical Properties																			
Turbidity	NTU	46	8585709	6.2	8585709	63	8585709	45	45	8585709	27	8585709	9.4	0.10	8585709	2100	0.10	8585709

AT1 METALS & SALINITY IN SOIL (SOIL)

Bureau Veritas ID		CYZ990		CYZ992			CYZ993			CYZ994			CYZ995			CYZ996			CZRS62		CZRS63		
Sampling Date		2024/10/29 09:40		2024/10/29 10:20			2024/10/29 11:15			2024/10/29 11:30			2024/10/2			2024/10/29			2024/11/06		2024/11/06		
COC Number		1/1		1/1			1/1			1/1			1/1			1/1			1/1		1/1		
	UNITS	WQ-04D	RDL	WQ-04A	RDL	QC Batch	WQ-07	RDL	QC Batch	WQ-06	RDL	QC Batch	WQ-04C	RDL	QC Batch	WQ-03	RDL	QC Batch	WQ-05B RES	RDL	WQ-04B RES	RDL	QC Batch
Calculated Parameters																							
Anion Sum	meq/L	21	N/A	8.8	N/A	B585138	5.0	N/A	B585138	4.8	N/A	B585138	2.6	N/A	B585138	19	N/A	B585138	19	N/A	21	N/A	B596425
Cation Sum	meq/L	15	N/A	11	N/A	B585138	8.6	N/A	B585138	8.2	N/A	B585138	7.3	N/A	B585138	22	N/A	B585138	18	N/A	21	N/A	B596425
Cation/EC Ratio	N/A	11	0.10	11	0.10	B585127	11	0.10	B585127	11	0.10	B585127	11	0.10	B585127	12	0.10	B585127	11	0.10	12	0.10	B596411
Calculated Calcium (Ca)	mg/kg	130	1.4	180	2.9	B585356	48	1.4	B585356	40	1.2	B585602	29	0.91	B585604	180	1.1	B585602	80	0.85	110	1.0	B596437
Calculated Magnesium (Mg)	mg/kg	56	0.93	71	1.9	B585356	30	0.97	B585356	24	0.79	B585602	16	0.61	B585604	69	0.76	B585602	41	0.56	59	0.67	B596437
Calculated Sodium (Na)	mg/kg	62	2.3	140	4.8	B585356	71	2.4	B585356	52	2.0	B585602	36	1.5	B585604	45	1.9	B585602	53	1.4	67	1.7	B596437
Calculated Potassium (K)	mg/kg	13	1.2	30	2.5	B585356	10	1.3	B585356	9.4	1.0	B585602	4.8	0.79	B585604	17	0.99	B585602	12	0.73	15	0.87	B596437
Calculated Boron (B)	mg/kg	0.16	0.093	0.25	0.19	B584823	<0.097	0.097	B584823	<0.079	0.079	B584823	0.074	0.061	B584823	<0.076	0.076	B584823	<0.056	0.056	<0.067	0.067	B595486
Calculated Chloride (Cl)	mg/kg	110	9.3	52	19	B585356	28	9.7	B585356	18	7.9	B585602	13	6.1	B585604	24	7.6	B585602	110	5.6	120	6.7	B596437
Calculated Sulphate (SO4)	mg/kg	810	4.7	740	9.6	B585356	190	4.8	B585356	160	4.0	B585602	58	3.0	B585604	670	3.8	B585602	380	2.8	530	3.4	B596437
Elements																							
Hex. Chromium (Cr 6+)	mg/kg	<0.17 (1)	0.17	<0.33 (1)	0.33	B593281	<0.18 (1)	0.18	B593281	<0.17 (1)	0.17	B593281	<0.080	0.080	B593281	<0.080	0.080	B593281	<0.080	0.080	<0.19 (1)	0.19	B597644
Soluble Parameters																							
Soluble Boron (B)	mg/L	0.17	0.10	0.13	0.10	B594824	<0.10	0.10	B594824	<0.10	0.10	B594824	0.12	0.10	B594824	<0.10	0.10	B594824	<0.10	0.10	<0.10	0.10	B607019
Soluble Chloride (Cl)	mg/L	120	10	27	10	B594804	29	10	B594804	23	10	B594804	21	10	B594804	31	10	B594804	190 (3)	10	180	10	B607021
Soluble Conductivity	dS/m	1.3	0.020	1.0	0.020	B594803	0.79	0.020	B594803	0.77	0.020	B594803	0.64	0.020	B594803	1.8	0.020	B594803	1.6	0.020	1.7	0.020	B607158
Soluble (CaCl2) pH	pH	7.28	N/A	7.63 (2)	N/A	B593968	7.76	N/A	B593968	7.80	N/A	B593968	7.87	N/A	B593968	7.64	N/A	B593968	7.74	N/A	7.65	N/A	B604203
Sodium Adsorption Ratio	N/A	1.2	0.10	1.6	0.10	B585353	2.0	0.10	B585353	1.8	0.10	B585353	1.7	0.10	B585353	0.82	0.10	B585353	1.6	0.10	1.6	0.10	B596435
Soluble Calcium (Ca)	mg/L	140	1.5	93	1.5	B594824	50	1.5	B594824	50	1.5	B594824	48	1.5	B594824	240	1.5	B594824	140	1.5	170	1.5	B607019
Soluble Magnesium (Mg)	mg/L	60	1.0	37	1.0	B594824	31	1.0	B594824	31	1.0	B594824	25	1.0	B594824	90	1.0	B594824	73	1.0	88	1.0	B607019
Soluble Sodium (Na)	mg/L	67	2.5	71	2.5	B594824	73	2.5	B594824	65	2.5	B594824	59	2.5	B594824	59	2.5	B594824	94	2.5	99	2.5	B607019
Soluble Potassium (K)	mg/L	14	1.3	16	1.3	B594824	11	1.3	B594824	12	1.3	B594824	7.9	1.3	B594824	23	1.3	B594824	20	1.3	22	1.3	B607019
Saturation %	%	93	N/A	190	N/A	B593965	97	N/A	B593965	79	N/A	B593965	61	N/A	B593965	76	N/A	B593965	56	N/A	67	N/A	B604197
Soluble Sulphate (SO4)	mg/L	870	5.0	380	5.0	B594824	200	5.0	B594824	200	5.0	B594824	95	5.0	B594824	870	5.0	B594824	680	5.0	790	5.0	B607019
Theoretical Gypsum Requirement	tonnes/ha	<0.20	0.20	<0.20	0.20	B585251	<0.20	0.20	B585605	<0.20	0.20	B585605	<0.20	0.20	B585605	<0.20	0.20	B585605	<0.20	0.20	<0.20	0.20	B596442
Elements																							
Total Antimony (Sb)	mg/kg	<0.50	0.50	<0.50	0.50	B594273	<0.50	0.50	B594273	0.60	0.50	B594273	<0.50	0.50	B594273	<0.50	0.50	B594273	<0.50	0.50	<0.50	0.50	B604769
Total Arsenic (As)	mg/kg	4.2	1.0	1.9	1.0	B594273	4.7	1.0	B594273	6.9	1.0	B594273	4.7	1.0	B594273	4.5	1.0	B594273	4.6	1.0	5.3	1.0	B604769
Total Barium (Ba)	mg/kg	220	1.0	140	1.0	B594273	250	1.0	B594273	280	1.0	B594273	280	1.0	B594273	270	1.0	B594273	160	1.0	190	1.0	B604769
Total Beryllium (Be)	mg/kg	0.42	0.40	<0.40	0.40	B594273	0.66	0.40	B594273	0.82	0.40	B594273	0.60	0.40	B594273	0.60	0.40	B594273	0.45	0.40	0.56	0.40	B604769
Total Cadmium (Cd)	mg/kg	0.33	0.050	0.68	0.050	B594273	0.51	0.050	B594273	0.54	0.050	B594273	0.53	0.050	B594273	0.49	0.050	B594273	0.31	0.050	0.35	0.050	B604769
Total Chromium (Cr)	mg/kg	12	1.0	11	1.0	B594273	18	1.0	B594273	21	1.0	B594273	16	1.0	B594273	16	1.0	B594273	14	1.0	15	1.0	B604769
Total Cobalt (Co)	mg/kg	5.6	0.50	3.1	0.50	B594273	7.2	0.50	B594273	8.2	0.50	B594273	6.6	0.50	B594273	6.4	0.50	B594273	6.7	0.50	7.6	0.50	B604769
Total Copper (Cu)	mg/kg	12	1.0	16	1.0	B594273	20	1.0	B594273	22	1.0	B594273	18	1.0	B594273	17	1.0	B594273	14	1.0	16	1.0	B604769
Total Lead (Pb)	mg/kg	7.2	0.50	9.9	0.50	B594273	12	0.50	B594273	12	0.50	B594273	11	0.50	B594273	10	0.50	B594273	7.9	0.50	9.2	0.50	B604769
Total Mercury (Hg)	mg/kg	<0.050	0.050	<0.050	0.050	B594273	<0.050	0.050	B594273	<0.050	0.050	B594273	<0.050	0.050	B594273	<0.050	0.050	B594273	<0.050	0.050	<0.050	0.050	B604769
Total Molybdenum (Mo)	mg/kg	0.54	0.40	2.5	0.40	B594273	0.70	0.40	B594273	1.2	0.40	B594273	1.0	0.40	B594273	0.93	0.40	B594273	0.55	0.40	0.59	0.40	B604769
Total Nickel (Ni)	mg/kg	14	1.0	13	1.0	B594273	23	1.0	B594273	26	1.0	B594273	21	1.0	B594273	21	1.0	B594273	16	1.0	19	1.0	B604769
Total Selenium (Se)	mg/kg	2.0	0.50	11	0.50	B594273	1.2	0.50	B594273	1.1	0.50	B594273	1.5	0.50	B594273	1.5	0.50	B594273	0.71	0.50	0.83	0.50	B604769
Total Silver (Ag)	mg/kg	<0.20	0.20	<0.20	0.20	B594273	<0.20	0.20	B594273	<0.20	0.20	B594273	<0.20	0.20	B594273	<0.20	0.20	B594273	<0.20	0.20	<0.20	0.20	B604769
Total Thallium (Tl)	mg/kg	0.13	0.10	0.14	0.10	B594273	0.20	0.10	B594273	0.21	0.10	B594273	0.17	0.10	B594273	0.17	0.10	B594273	0.12	0.10	0.14	0.10	B604769
Total Tin (Sn)	mg/kg	<1.0	1.0	<1.0	1.0	B594273	<1.0	1.0	B594273	<1.0	1.0	B594273	<1.0	1.0	B594273	<1.0	1.0	B594273	<1.0	1.0	<1.0	1.0	B604769
Total Uranium (U)	mg/kg	0.81	0.20	2.8	0.20	B594273	1.6	0.20	B594273	1.8	0.20	B594273	1.8	0.20	B594273	1.7	0.20	B594273	0.87	0.20	0.97	0.20	B604769
Total Vanadium (V)	mg/kg	19	1.0	16	1.0	B594273	31	1.0	B594273	36	1.0	B594273	27	1.0	B594273	26	1.0	B594273	23	1.0	26	1.0	B604769
Total Zinc (Zn)	mg/kg	1100	10	55	10	B594273	89	10	B594273	98	10	B594273	85	10	B594273	82	10	B594273	83	10	88	10	B604769

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Detection limits raised due to high moisture content, samples contain => 50% moisture.

(2) pH was done on a 10:1 Calcium Chloride to soil ratio due to the matrix of the sample.

(3) Duplicate exceeds acceptance criteria due to sample non homogeneity.

Results relate only to the items tested.

PHYSICAL TESTING (SOIL)

Bureau Veritas ID		CYZ989	CYZ990	CYZ991	CYZ992	CYZ993	CYZ994	CYZ995	CYZ996		CZR562	CZR563		
Sampling Date		2024/10/29 09:15	2024/10/29 09:40	2024/10/29 09:50	2024/10/29 10:20	2024/10/29 11:15	2024/10/29 11:30	2024/10/29 11:45	2024/10/29 12:20					
COC Number		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1		1/1	1/1		
	UNITS	**WQ-05B**	**WQ-04D**	**WQ-04B**	**WQ-04A**	**WQ-07**	**WQ-06**	**WQ-04C**	**WQ-03**	**QC Batch**	**WQ-05B RESAMPLE**	**WQ-04B RESAMPLE**	**RDL**	**QC Batch**
Physical Properties														
Moisture	%	56	54	55	75	55	54	42	40	B591970	30	57	0.30	B593521

RDL = Reportable Detection Limit

Results relate only to the items tested.

Flow Data For Oct 29, 2024

Site	Channel Width (m)	Depth*(m)			Velocity* (m/sec)			Discharge (m3/sec)	Comments
		RMID	MID	LMID	RMID	MID	LMID		
FL 1	-	-	-	-	-	-	-	-	Channel was dry at the time of the survey
FL 2	-	-	-	-	-	-	-	-	Channel was dry at the time of the survey
FL 3	-	-	-	-	-	-	-	-	Channel was dry at the time of the survey
FL 4	-	-	-	-	-	-	-	-	Channel was dry at the time of the survey

* RMID= right mid channel, MID= mid channel, LMID= left mid channel

(-)= null result

In-situ Water Quality Paramaters - Oct 29 2024

Site	Temp	Turbidity	Dissolved Oxygen (mg/l)	pH	Conductivity (µS/cm)	Depth (m)	Date Sampled	Status
WQ1	-	-	-	-	-	-	2024-10-29	Dry
WQ2	-	-	-	-	-	-	2024-10-29	Dry. Heavily chanalized by beavers.
WQ3	1.6	50.35	4.94	7.35	1350.00	0.25	2024-10-29	Area is heavily chanalized from beavers. Was able to find pooled water slightly north
WQ4a	5.8	20.09	6.23	7.62	1817.00	0.25	2024-10-29	Wet
WQ4b	5.4	3.94	10.09	8.09	2442.00	0.25	2024-10-29	Wet, High Turbidity cause by distrubance to ground
WQ4c	3.4	2.97	10.79	8.40	1974.00	-	2024-10-29	Wet
WQ4d	-	-	-	-	-	-	2024-10-29	Minimal wet. Unable to collect WQ.
WQ5a	-	-	-	-	-	-	2024-10-29	Dry
WQ5b	4.8	78.00	10.73	7.47	478.70	0.10	2024-10-29	Wet
WQ5c*	-	-	-	-	-	-	2024-10-29	Permenently dry
WQ06	3.0	10.03	9.47	8.09	2069.00	0.10	2024-10-29	Wet
WQ07	2.7	12.90	8.35	8.19	2020.00	0.10	2024-10-29	Wet

(-)= null result due to site being dry
(*) = site has been encompassed by the construction area and is permanently dry