

Appendix 20: 2022 Water Monitoring Stations Results

MEL-03-01	Sample date	Annual Average					7/19/2022	8/20/2022	9/19/2022
Parameter	Unit	2018	2019	2020	2021	2022	C2K7088	C2O3138	C2R5549
Field Measured									
Temperature	°C	-	10.74	12.80	8.47	12.94	14.82	16.2	7.8
pH	pH units	-	7.38	7.61	7.20	7.42	7.58	7.34	7.35
Conductivity	uS/cm	-	71.62	73.25	87.70	83.5	82.6	84.1	83.8
Dissolved oxygen	mg/L	-	10.08	10.73	11.85	11.57	10.38	9.81	14.53
Dissolved oxygen	%	-	99.92	100.60	104.45	109.07	104.50	99.4	123.3
Conventional Parameters									
pH	pH units	7.48	7.55	7.31	7.43	7.52	7.63	7.34	7.58
Turbidity	NTU	0.20	0.10	0.20	0.14	0.17	0.10	0.2	0.2
Specific conductivity	umhos/cm	76.00	72.75	76.00	80.00	83.00	81.00	83	85
Hardness, as CaCO3	mg/L	21.40	21.13	22.17	22.40	22.93	23.30	22.3	23.2
Total alkalinity, as CaCO3	mg/L	18.00	16.25	16.33	17.75	18.00	20.00	17	17
Carbonate, as CaCO3	mg/L	1.00	1.00	1.00	0.50	0.50	< 1.0	< 1.0	< 1.0
Bicarbonate, as CaCO3	mg/L	18.00	16.25	16.33	17.50	18.00	20.00	17	17
TDS	mg/L	25.00	50.00	38.33	32.50	41.67	50.00	45	30
TDS, calculated	mg/L	-	-	-	39.33	41	42	40	42
TSS	mg/L	1.00	1.25	1.00	0.63	0.5	< 1	< 1	< 1
Total organic carbon	mg/L	2.30	2.38	2.40	2.43	2.70	2.5	2.7	2.9
Dissolved organic carbon	mg/L	2.40	2.13	2.60	2.25	2.43	2.4	2.5	2.4
Major Ions									
Chloride	mg/L	8.40	8.50	8.80	9.85	11.3	11	11	12
Cyanide	mg/L	0.0050	0.0050	0.0050	0.0025	0.00034	< 0.00050	< 0.00050	0.00053
Cyanide (free)	mg/L	-	0.0016	0.0010	0.0028	0.0015	< 0.0020	0.0025	< 0.0020
Cyanide (WAD)	mg/L	0.0010	0.0010	0.0010	0.0007	0.00053	< 0.00050	< 0.00050	0.0011
Silica	mg/L	0.23	0.18	0.23	0.38	0.230	0.17	0.22	0.3
Sulfate	mg/L	3.20	3.05	3.37	3.83	4.43	4	4.2	5.1
Nutrients and Chlorophyll a									
Ammonia Nitrogen (as N)	mg/L	0.05	0.07	0.08	0.05	0.0250	< 0.050	< 0.050	< 0.050
Nitrate (as N)	mg/L	0.10	0.10	0.10	0.05	0.0500	< 0.10	< 0.10	< 0.10
Nitrite (as N)	mg/L	0.01	0.01	0.01	0.01	0.0050	< 0.010	< 0.010	< 0.010
Total Kjeldahl nitrogen	mg/L	0.12	0.17	0.16	0.18	0.183	0.13	0.24	0.18
Total phosphorus (SW6020 or SM4500-P-E)	mg/L	0.02	0.02	0.01	0.01	0.0035	0.0024	0.0021	0.0059
Total phosphorus (EPA 6020B (MODIFIED) or SM4500-PB)	mg/L	-	-	-	0.01	0.010	< 0.020	< 0.020	< 0.020
Orthophosphate (P)	mg/L	0.01	0.01	0.01	0.01	0.0050	< 0.010	< 0.010	< 0.010
Total Metals									
Aluminum	mg/L	0.00700	0.00693	0.00276	0.00458	0.00347	0.00238	0.0049	0.00313
Antimony	mg/L	0.00050	0.00050	0.00002	0.00001	0.000023	< 0.000020	0.000048	< 0.000020
Arsenic	mg/L	0.00020	0.00019	0.00025	0.00031	0.000313	0.0003	0.000333	0.000307
Barium	mg/L	0.00720	0.00755	0.00761	0.00799	0.01042	0.00805	0.0157	0.00752
Beryllium	mg/L	0.00010	0.00010	0.00001	0.00001	0.000005	< 0.000010	< 0.000010	< 0.000010
Boron	mg/L	0.05000	0.05000	0.01000	0.00500	0.0050	< 0.01	< 0.01	< 0.01
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00000	0.0000025	< 0.0000050	< 0.0000050	< 0.0000050
Chromium	mg/L	0.00100	0.00100	0.00010	0.00005	0.00005	< 0.00010	< 0.00010	< 0.00010
Cobalt	mg/L	-	0.00020	0.00001	0.00001	0.0000123	0.0000154	0.0000112	0.0000104
Copper	mg/L	0.00067	0.00066	0.00177	0.00065	0.000892	0.0012	0.000737	0.000738
Iron	mg/L	0.01400	0.01325	0.01197	0.01210	0.0086	0.0086	0.0099	0.0072
Lead	mg/L	0.00020	0.00020	0.00001	0.00001	0.0002086	0.0000238	0.000595	0.0000071
Lithium	mg/L	0.00200	0.00200	0.00062	0.00074	0.00077	0.00072	0.00085	0.00074
Manganese	mg/L	0.00220	0.00243	0.00241	0.00208	0.00169	0.00175	0.00203	0.00129
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.00100	0.00100	0.00012	0.00008	0.000088	0.000087	0.000088	0.000088
Nickel	mg/L	0.00100	0.00100	0.00038	0.00041	0.000405	0.000427	0.000393	0.000394
Potassium (total)	mg/L	0.88500	0.86150	0.91500	0.90500	0.956	0.901	0.998	0.97
Selenium	mg/L	0.00010	0.00010	0.00004	0.00003	0.00006	0.000056	< 0.000040	0.000092
Silver	mg/L	0.00002	0.00002	0.00001	0.00000	0.0000025	< 0.0000050	< 0.0000050	< 0.0000050
Strontium	mg/L	0.03330	0.03123	0.03373	0.03600	0.0362	0.0351	0.0363	0.0372
Thallium	mg/L	0.00001	0.00001	0.00000	0.00000	0.0000010	< 0.0000020	< 0.0000020	< 0.0000020
Tin	mg/L	0.00500	0.00500	0.00020	0.00010	0.00010	< 0.00020	< 0.00020	< 0.00020
Titanium	mg/L	0.00500	0.00500	0.00050	0.00025	0.00025	< 0.00050	< 0.00050	< 0.00050
Uranium	mg/L	0.00010	0.00010	0.00002	0.00002	0.0000173	0.0000165	0.0000172	0.0000182
Vanadium	mg/L	0.00500	0.00500	0.00020	0.00010	0.00010	< 0.00020	< 0.00020	< 0.00020
Zinc	mg/L	0.00500	0.00500	0.00026	0.00114	0.00097	0.00093	0.00133	0.00066
Dissolved Metals									
Aluminum	mg/L	0.00430	0.00325	0.00164	0.00372	0.00284	0.00254	0.00313	0.00284
Antimony	mg/L	0.00050	0.00050	0.00002	0.00001	0.00001	< 0.000020	< 0.000020	< 0.000020
Arsenic	mg/L	0.00019	0.00020	0.00026	0.00031	0.00032	0.000335	0.000308	0.000312
Barium	mg/L	0.00720	0.00728	0.00768	0.00761	0.00747	0.00784	0.00725	0.00733
Beryllium	mg/L	0.00010	0.00010	0.00001	0.00001	0.000005	< 0.000010	< 0.000010	< 0.000010
Boron	mg/L	0.05000	0.05000	0.01000	0.00825	0.0050	< 0.01	< 0.01	< 0.01

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Parameter	Unit	2018	2019	2020	2021	2022	C2K7088	C2O3138	C2R5549
Cadmium	mg/L	0.0001	0.0001	0.0001	0.0000	0.0000025	< 0.000050	< 0.000050	< 0.000050
Calcium (Dissolved)	mg/L	6.95	6.69	6.93	6.93	7.40	7.65	7.28	7.28
Chromium	mg/L	0.00100	0.00100	0.00010	0.00005	0.00005	< 0.00010	< 0.00010	< 0.00010
Cobalt	mg/L	-	0.00020	0.00001	0.00001	0.0000047	0.0000052	< 0.000050	0.000063
Copper	mg/L	0.00060	0.00061	0.00173	0.00068	0.000739	0.000785	0.000728	0.000705
Iron	mg/L	0.00500	0.00523	0.00413	0.00588	0.0037	0.0037	0.0042	0.0031
Lead	mg/L	0.00020	0.00020	0.00001	0.00001	0.0000034	0.0000053	< 0.000050	< 0.000050
Lithium	mg/L	0.00200	0.00200	0.00068	0.00065	0.00073	0.00083	0.00061	0.00074
Magnesium (Dissolved)	mg/L	1.11	1.10	1.18	1.17	1.27	1.26	1.27	1.29
Manganese	mg/L	0.00100	0.00113	0.00045	0.00039	0.000355	0.000511	0.000256	0.000298
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.0000050	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.00100	0.00100	0.00015	0.00009	0.000085	0.000078	0.000094	0.000082
Nickel	mg/L	0.00100	0.00100	0.00041	0.00039	0.000396	0.000426	0.000393	0.00037
Potassium (Dissolved)	mg/L	0.87	0.85	0.89	0.89	0.94	0.904	0.962	0.955
Selenium	mg/L	0.00010	0.00010	0.00004	0.00003	0.000020	< 0.000040	< 0.000040	< 0.000040
Silver	mg/L	0.00002	0.00002	0.00001	0.00000	0.0000025	< 0.0000050	< 0.0000050	< 0.0000050
Sodium (Dissolved)	mg/L	4.36	4.30	4.50	4.68	5.02	5.06	4.91	5.08
Strontium	mg/L	0.03350	0.03085	0.03437	0.03490	0.0374	0.038	0.0383	0.0358
Thallium	mg/L	0.00001	0.00001	0.00000	0.00000	0.0000013	0.000002	< 0.0000020	< 0.0000020
Tin	mg/L	0.00500	0.00500	0.00020	0.00010	0.00010	< 0.00020	< 0.00020	< 0.00020
Titanium	mg/L	0.00500	0.00500	0.00059	0.00025	0.00025	< 0.00050	< 0.00050	< 0.00050
Uranium	mg/L	0.00010	0.00010	0.00002	0.00002	0.0000149	0.0000144	0.0000148	0.0000156
Vanadium	mg/L	0.00500	0.00500	0.00020	0.00010	0.00010	< 0.00020	< 0.00020	< 0.00020
Zinc	mg/L	0.00500	0.00500	0.00050	0.00122	0.000673	0.00115	0.00045	0.00042
Radionuclides									
Radium-226	Bq/l	0.00500	0.00500	0.00500	0.00250	0.0025	< 0.0050	< 0.0050	< 0.0050
Volatile Organics									
F1 (C6-C10)	mg/L	0.02500	0.02500	0.02500	0.01250	0.0125	< 0.025	< 0.025	< 0.025
F2 (C10-C16)	mg/L	0.10000	0.10000	0.10000	0.05000	0.05	< 0.1	< 0.1	< 0.1
F3 (C16-C34)	mg/L	0.20000	0.20000	0.20000	0.10000	0.1	< 0.2	< 0.2	< 0.2
F4 (C34-C50)	mg/L	0.20000	0.20000	0.20000	0.10000	0.1	< 0.2	< 0.2	< 0.2

QAQC MEL-03-01	Sample Date		8/20/2022					
Parameter	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters								
pH	pH units		5.71	-	7.35	7.34	0.14	-
Dissolved Oxygen	mg/L		10.8	-	10.5	10.4	0.96	-
Turbidity	NTU	0.1	0.1	0.1	0.2	0.2	0.00	0.00
Specific conductivity	umhos/cm	1	1	1	83	83	0.00	0.00
Hardness, as CaCO3	mg/L	0.5	0.5	-	22.8	22.3	2.22	-
Hardness, as CaCO3 (dissolved)	mg/L	0.5	0.5	-	23.2	23.4	0.86	-
Total alkalinity, as CaCO3	mg/L	1	1	1	17	17	0.00	0.00
Carbonate, as CaCO3	mg/L	1	1	-	1	1	0.00	-
Bicarbonate, as CaCO3	mg/L	1	1	-	17	17	0.00	-
TDS	mg/L	10	10	10	50	45	10.53	0.00
TDS, calculated	mg/L	1	1	-	39	40	2.53	-
TSS	mg/L	1	1	1	1	1	0.00	0.00
Total organic carbon	mg/L	0.4	0.4	0.4	2.7	2.7	0.00	0.00
Dissolved organic carbon	mg/L	0.4	0.4	0.4	2.5	2.5	0.00	0.00
Major Ions								
Chloride	mg/L	1	1	1	10	11	9.52	0.00
Cyanide	mg/L	0.0005	0.0005	0.0005	0.00069	0.0005	31.93	0.00
Cyanide (free)	mg/L	0.002	0.002	0.002	0.0023	0.0025	8.33	0.00
Cyanide (WAD)	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00
Silica	mg/L	0.05	0.05	0.05	0.23	0.22	4.44	0.00
Sulfate	mg/L	0.5	0.5	0.5	4.2	4.2	0.00	0.00
Nutrients and Chlorophyll a								
Ammonia Nitrogen (as N)	mg/L	0.05	0.05	0.05	0.063	0.05	23.01	0.00
Nitrate (as N)	mg/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00
Nitrite (as N)	mg/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Nitrate + nitrite (as N)	mg/L	0.1	0.1	-	0.1	0.1	0.00	-
Total Kjeldahl nitrogen	mg/L	0.1	0.1	0.1	0.22	0.24	8.70	0.00
Total phosphorus	mg/L	0.02	0.02	0.02	0.044	0.02	75.00	0.00
Total phosphorus	mg/L	0.002	0.002	0.002	0.003	0.0021	35.29	0.00
Dissolved phosphorus	mg/L	0.002	0.002	0.002	0.0023	0.002	13.95	0.00
Orthophosphate (P)	mg/L	0.01	0.01	0.01	0.011	0.01	9.52	0.00
Total Metals								
Aluminum	mg/L	0.0005	0.00158	0.0005	0.00365	0.0049	29.24	103.85
Antimony	mg/L	0.00002	0.00002	0.00002	0.00002	0.000048	82.35	0.00
Arsenic	mg/L	0.00002	0.00002	0.00002	0.000322	0.000333	3.36	0.00
Barium	mg/L	0.00002	0.000021	0.00002	0.00747	0.0157	71.04	4.88
Beryllium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Bismuth	mg/L	0.000005	0.000005	0.000005	0.000005	0.000005	0.00	0.00
Boron	mg/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Cadmium	mg/L	0.000005	0.000005	0.000005	0.000005	0.000005	0.00	0.00
Calcium (total)	mg/L	0.01	0.05	-	7.14	7	1.98	-
Chromium	mg/L	0.0001	0.00021	0.0001	0.0001	0.0001	0.00	70.97
Cobalt	mg/L	0.000005	0.000005	0.000005	0.0000125	0.0000112	10.97	0.00
Copper	mg/L	0.00005	0.00006	0.00005	0.000745	0.000737	1.08	18.18
Iron	mg/L	0.001	0.001	0.001	0.0105	0.0099	5.88	0.00

QAQC MEL-03-01	Sample Date		8/20/2022					
Parameter	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Lead	mg/L	0.000005	0.0000054	0.000005	0.0000122	0.000595	191.96	7.69
Lithium	mg/L	0.0005	0.0005	0.0005	0.00084	0.00085	1.18	0.00
Magnesium (total)	mg/L	0.01	0.05	-	1.2	1.17	2.53	-
Manganese	mg/L	0.00005	0.00005	0.00005	0.00206	0.00203	1.47	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.00005	0.00005	0.00005	0.000089	0.000088	1.13	0.00
Nickel	mg/L	0.00002	0.00002	0.00002	0.000391	0.000393	0.51	0.00
Potassium (total)	mg/L	0.01	0.05	-	0.934	0.998	6.63	-
Selenium	mg/L	0.00004	0.00004	0.00004	0.00004	0.00004	0.00	0.00
Silicon	mg/L	0.05	0.05	0.05	0.096	0.103	7.04	0.00
Silver	mg/L	0.000005	0.000005	0.000005	0.000005	0.000005	0.00	0.00
Sodium (total)	mg/L	0.01	0.05	-	4.84	4.73	2.30	-
Strontium	mg/L	0.00005	0.00005	0.00005	0.0361	0.0363	0.55	0.00
Sulphur	mg/L	0.6	3	-	3	3	0.00	-
Thallium	mg/L	0.000002	0.000002	0.000002	0.000002	0.000002	0.00	0.00
Tin	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Titanium	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Uranium	mg/L	0.000002	0.000002	0.000002	0.0000173	0.0000172	0.58	0.00
Vanadium	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Zinc	mg/L	0.0001	0.00051	0.0001	0.00091	0.00133	37.50	134.43
Zirconium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Dissolved Metals								
Aluminum	mg/L	0.0005	0.00106	0.0005	0.0026	0.00313	18.50	71.79
Antimony	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Arsenic	mg/L	0.00002	0.00002	0.00002	0.000312	0.000308	1.29	0.00
Barium	mg/L	0.00002	0.00002	0.00002	0.00721	0.00725	0.55	0.00
Beryllium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Bismuth	mg/L	0.000005	0.000005	0.000005	0.000005	0.000005	0.00	0.00
Boron	mg/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Cadmium	mg/L	0.000005	0.000005	0.000005	0.000005	0.000005	0.00	0.00
Calcium (Dissolved)	mg/L	0.01	0.05	-	7.24	7.28	0.55	-

QAQC MEL-03-01	Sample Date		8/20/2022					
Parameter	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Chromium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Cobalt	mg/L	0.000005	0.000005	0.000005	0.0000088	0.000005	55.07	0.00
Copper	mg/L	0.00005	0.000088	0.00005	0.000806	0.000728	10.17	55.07
Iron	mg/L	0.001	0.001	0.001	0.0041	0.0042	2.41	0.00
Lead	mg/L	0.000005	0.000057	0.000005	0.000054	0.000005	7.69	13.08
Lithium	mg/L	0.0005	0.0005	0.0005	0.00057	0.00061	6.78	0.00
Magnesium (Dissolved)	mg/L	0.01	0.05	-	1.23	1.27	3.20	-
Manganese	mg/L	0.00005	0.00005	0.00005	0.000249	0.000256	2.77	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.00005	0.00005	0.00005	0.000086	0.000094	8.89	0.00
Nickel	mg/L	0.00002	0.00002	0.00002	0.000403	0.000393	2.51	0.00
Potassium (Dissolved)	mg/L	0.01	0.05	-	0.95	0.962	1.26	-
Selenium	mg/L	0.00004	0.00004	0.00004	0.00004	0.00004	0.00	0.00
Silicon	mg/L	0.05	0.05	0.05	0.142	0.16	11.92	0.00
Silver	mg/L	0.000005	0.000005	0.000005	0.000005	0.000005	0.00	0.00
Sodium (Dissolved)	mg/L	0.01	0.05	-	4.94	4.91	0.61	-
Strontium	mg/L	0.00005	0.00005	0.00005	0.037	0.0383	3.45	0.00
Sulphur	mg/L	0.6	3	-	3	3	0.00	-
Thallium	mg/L	0.000002	0.000002	0.000002	0.0000023	0.000002	13.95	0.00
Tin	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Titanium	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Uranium	mg/L	0.000002	0.000055	0.000002	0.000024	0.0000148	47.42	93.33
Vanadium	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Zinc	mg/L	0.0001	0.0001	0.0001	0.0001	0.00045	127.27	0.00
Zirconium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Radionuclides								
Radium-226	Bq/l	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Volatile Organics								
Benzene	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Ethylbenzene	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Toluene	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Xylenes	mg/L	0.0004	0.0004	0.0004	0.0004	0.0004	0.00	0.00
m,p-Xylenes	mg/L	0.0004	0.0004	0.0004	0.0004	0.0004	0.00	0.00
o-Xylene	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
F1 (C6-C10)-BTEX	mg/L	0.025	0.025	0.025	0.025	0.025	0.00	0.00
F1 (C6-C10)	mg/L	0.025	0.025	0.025	0.025	0.025	0.00	0.00
F2 (C10-C16)	mg/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00
F3 (C16-C34)	mg/L	0.2	0.2	0.2	0.2	0.2	0.00	0.00
F4 (C34-C50)	mg/L	0.2	0.2	0.2	0.2	0.2	0.00	0.00
% Exceedance*							1%	0%

Footnotes:

RPD = Relative Percent Difference; MDL: Method Detection Limit

All value "<DL" have been replaced by "DL".

* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.

Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.

Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.

Italic values correspond to a RPD higher than 20% and for which one of the result is within 10X the MDL and the other one exceeds 10x the MDL.

MEL-12	Sample date	Annual Average					7/18/2022	8/15/2022	9/12/2022
Parameter	Units	2018	2019	2020	2021	2022	C2K5983	C2N6082	C2Q7541
Field Measured									
Temperature	°C	-	10.85	7.59	7.79	15.2	15.4	19.4	10.7
pH	pH units	-	7.95	7.27	7.68	7.62	7.78	7.99	7.09
Conductivity	uS/cm	-	3256.86	4507.29	2612.00	2,407	2061	2323	2836
Dissolved oxygen	mg/L	-	9.05	11.23	10.72	8.14	9.44	6.84	-
Dissolved oxygen	%	-	84.41	87.30	91.80	87.1	95	74.9	91.5
Conventional Parameters									
pH	pH units	7.49	7.59	7.63	7.70	7.88	7.78	7.97	7.89
Turbidity	NTU	7.13	6.67	2.27	1.95	0.4	0.4	0.3	0.5
Hardness, as CaCO3	mg/L	481.00	740.43	1066.86	583.17	480	399	458	584
Total alkalinity, as CaCO3	mg/L	-	50.83	102.43	75.50	75	75	71	80
TDS	mg/L	1152.50	2131.43	2868.57	1540.00	1,320	1080	1370	1510
TDS, calculated	mg/L	-	-	-	1700	1,233	1000	1200	1500
TSS	mg/L	49.00	15.57	6.57	6.33	4	7	3	3
Major Ions									
Chloride	mg/L	480.00	920.00	1250.00	618.33	527	430	520	630
Cyanide	mg/L	0.01	0.01	0.01	0.00	0.00518	0.00135	0.0007	0.0135
Fluoride	mg/L	-	0.10	0.10	0.09	0.10	0.14	< 0.10	0.12
Silica	mg/L	-	-	-	0.58	0.305	< 0.050	0.15	0.74
Sulfate	mg/L	53.00	141.00	237.14	220.00	213	170	210	260
Nutrients and Chlorophyll a									
Ammonia Nitrogen (as N)	mg/L	1.16	7.11	6.69	1.25	0.36	0.12	0.25	0.7
Nitrate (as N)	mg/L	3.99	23.61	24.56	15.06	7.11	7.96	4.28	9.1
Nitrite (as N)	mg/L	0.18	0.98	0.20	0.37	0.195	0.227	0.08	0.279
Total phosphorus	mg/L	0.15	0.10	0.10	0.08	0.054	0.051	0.044	0.067
Orthophosphate (P)	mg/L	0.01	0.01	0.05	0.03	0.032	0.033	0.026	0.038
Total Metals									
Aluminum	mg/L	1.86425	0.44739	0.33157	0.15543	0.2118	0.296	0.247	0.0925
Arsenic	mg/L	0.00430	0.00548	0.01364	0.01752	0.0166	0.0202	0.0151	0.0145
Barium	mg/L	0.12425	0.11467	0.15166	0.06772	0.0569	0.0491	0.0563	0.0652
Cadmium	mg/L	0.00003	0.00005	0.00006	0.00003	0.000017	0.000023	0.000011	0.000016
Chromium	mg/L	0.00143	0.00146	0.00229	0.00067	0.0005	< 0.0010	< 0.0010	< 0.0010
Copper	mg/L	0.00334	0.00289	0.00288	0.00284	0.00325	0.00389	0.00291	0.00295
Iron	mg/L	1.16650	0.42786	0.25829	0.21650	0.140	0.239	0.075	0.107
Lead	mg/L	0.00063	0.00051	0.00118	0.00127	0.00058	0.00114	0.00026	0.00035
Manganese	mg/L	0.44000	0.21596	0.97300	0.23283	0.06517	0.0705	0.0596	0.0654
Mercury	mg/L	0.00001	0.00001	0.00004	0.00001	0.000010	0.00002	< 0.00001	< 0.00001
Molybdenum	mg/L	0.00188	0.00277	0.00404	0.00493	0.0062	0.0056	0.007	0.006
Nickel	mg/L	0.00448	0.00719	0.00934	0.00715	0.0047	0.0045	0.0041	0.0055
Selenium	mg/L	0.00011	0.00022	0.00044	0.00101	0.00043	0.00045	0.00034	0.00049
Silver	mg/L	0.00002	0.00003	0.00005	0.00001	0.000010	< 0.000020	< 0.000020	< 0.000020

MEL-12	Sample date	Annual Average					7/18/2022	8/15/2022	9/12/2022
Parameter	Units	2018	2019	2020	2021	2022	C2K5983	C2N6082	C2Q7541
Thallium	mg/L	0.00003	0.00005	0.00005	0.00003	0.00003	0.000033	0.000032	0.000035
Zinc	mg/L	0.02275	0.08231	0.02503	0.00767	0.0038	0.0063	< 0.0050	< 0.0050
Dissolved Metals									
Calcium (Dissolved)	mg/L	-	201.85714	296.71429	155.33333	125.0	102	118	155
Magnesium (Dissolved)	mg/L	-	51.45714	74.10000	44.10000	35.9	29.1	36.7	41.9
Potassium (Dissolved)	mg/L	-	24.14286	33.00000	20.93333	19.9	16.7	19.8	23.1
Sodium (Dissolved)	mg/L	-	343.28571	470.71429	273.16667	242	193	248	284

QAQC MEL-12		Sample Date		6/20/2022					7/18/2022					
Parameter	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters														
pH	pH units		6.03	-	7.47	7.38	1.21	-	6.06	-	7.84	7.78	0.77	-
Turbidity	NTU	0.1	0.1	0.1	0.7	0.2	111.11	0.00	0.1	0.1	0.9	0.4	76.92	0.00
Specific conductivity	umhos/cm	1	1.2	1	1600	1600	0.00	18.18	1.3	1	1900	2000	5.13	26.09
Hardness, as CaCO3	mg/L	0.5	0.5	-	344	329	4.46	-	0.5	-	409	399	2.48	-
Hardness, as CaCO3 (dissolved)	mg/L	0.5	0.5	-	315	311	1.28	-	0.5	-	387	376	2.88	-
Total alkalinity, as CaCO3	mg/L	1	1	1	42	42	0.00	0.00	1	1	74	75	1.34	0.00
TDS	mg/L	10	10	10	960	955	0.52	0.00	10	10	1100	1080	1.83	0.00
TDS, calculated	mg/L	1	1	-	840	830	1.20	-	1	-	1000	1000	0.00	-
TSS	mg/L	1	1	1	3	3	0.00	0.00	1	1	6	7	15.38	0.00
Total organic carbon	mg/L	0.4	0.48	0.4	6.8	6.9	1.46	18.18	0.4	0.4	9.5	9.5	0.00	0.00
Major Ions														
Chloride	mg/L	1	1	1	350	350	0.00	0.00	1	1	430	430	0.00	0.00
Cyanide	mg/L	0.0005	0.0005	0.0005	0.00305	0.00286	6.43	0.00	0.0005	0.0005	0.00145	0.00135	7.14	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00	0.1	0.1	0.11	0.14	24.00	0.00
Silica	mg/L	0.05	0.05	0.05	0.13	0.25	63.16	0.00	0.05	0.05	0.05	0.05	0.00	0.00
Sulfate	mg/L	0.5	0.5	0.5	140	140	0.00	0.00	0.5	0.5	170	170	0.00	0.00
Nutrients and Chlorophyll a														
Ammonia Nitrogen (as N)	mg/L	0.05	0.05	0.05	0.28	0.27	3.64	0.00	0.05	0.05	0.061	0.12	65.19	0.00
Nitrate (as N)	mg/L	0.1	0.1	0.1	8.83	8.98	1.68	0.00	0.1	0.1	7.53	7.96	5.55	0.00
Nitrite (as N)	mg/L	0.01	0.01	0.01	0.242	0.242	0.00	0.00	0.01	0.01	0.228	0.227	0.44	0.00
Nitrate + nitrite (as N)	mg/L	0.1	0.1	-	9.07	9.22	1.64	-	0.1	-	7.76	8.19	5.39	-
Total phosphorus	mg/L	0.02	0.02	0.02	0.03	0.051	51.85	0.00	0.02	0.02	0.038	0.051	29.21	0.00
Orthophosphate (P)	mg/L	0.01	0.01	0.01	0.01	0.012	18.18	0.00	0.01	0.01	0.035	0.033	5.88	0.00
Total Metals														
Aluminum	mg/L	0.003	0.0172	0.003	0.283	0.152	60.23	140.59	0.003	0.003	0.306	0.296	3.32	0.00
Antimony	mg/L	0.0005	0.0005	0.0005	0.0008	0.0008	0.00	0.00	0.0005	0.0005	0.00089	0.00092	3.31	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0196	0.0196	0.00	0.00	0.0001	0.0001	0.0205	0.0202	1.47	0.00
Barium	mg/L	0.001	0.001	0.001	0.0333	0.0325	2.43	0.00	0.001	0.001	0.047	0.0491	4.37	0.00
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Bismuth	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.00	0.00
Boron	mg/L	0.05	0.05	0.05	0.19	0.193	1.57	0.00	0.05	0.05	0.258	0.264	2.30	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00003	0.000019	44.90	0.00	0.00001	0.00001	0.000022	0.000023	4.44	0.00
Calcium (total)	mg/L	0.05	0.162	-	97.8	89.7	8.64	-	0.127	-	113	110	2.69	-
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.00	0.00
Cobalt	mg/L	0.0002	0.0002	0.0002	0.00139	0.00138	0.72	0.00	0.0002	0.0002	0.00116	0.00112	3.51	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.0051	0.00323	44.90	0.00	0.0005	0.0005	0.00405	0.00389	4.03	0.00
Iron	mg/L	0.01	0.01	0.01	0.261	0.066	119.27	0.00	0.01	0.01	0.254	0.239	6.09	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.00179	0.00071	86.40	0.00	0.0002	0.0002	0.00107	0.00114	6.33	0.00
Lithium	mg/L	0.002	0.002	0.002	0.021	0.021	0.00	0.00	0.002	0.002	0.0305	0.0308	0.98	0.00
Magnesium (total)	mg/L	0.05	0.05	-	24.4	25.5	4.41	-	0.05	-	30.7	30.1	1.97	-
Manganese	mg/L	0.001	0.001	0.001	0.128	0.126	1.57	0.00	0.001	0.001	0.0726	0.0705	2.94	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00002	0.00002	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.004	0.004	0.00	0.00	0.001	0.001	0.0052	0.0056	7.41	0.00
Nickel	mg/L	0.001	0.001	0.001	0.0059	0.0052	12.61	0.00	0.001	0.001	0.0045	0.0045	0.00	0.00
Potassium (total)	mg/L	0.05	0.05	-	13.2	13.8	4.44	-	0.05	-	17.6	17.3	1.72	-
Selenium	mg/L	0.0001	0.0001	0.0001	0.00049	0.00048	2.06	0.00	0.0001	0.0001	0.00042	0.00045	6.90	0.00
Silicon	mg/L	0.1	0.1	0.1	0.3	0.17	55.32	0.00	0.1	0.1	0.25	0.24	4.08	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Sodium (total)	mg/L	0.05	0.08	-	160	165	3.08	-	0.05	-	205	200	2.47	-
Strontium	mg/L	0.001	0.001	0.001	1.03	1.06	2.87	0.00	0.001	0.001	1.38	1.38	0.00	0.00
Sulphur	mg/L	3	3	-	49.2	48.8	0.82	-	3	-	60.4	59.6	1.33	-
Thallium	mg/L	0.00001	0.00001	0.00001	0.000022	0.000021	4.65	0.00	0.00001	0.00001	0.000032	0.000033	3.08	0.00
Tin	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Titanium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.00177	0.00179	1.12	0.00	0.0001	0.0001	0.00216	0.00214	0.93	0.00
Vanadium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.0566	0.005	167.53	0.00	0.005	0.005	0.0073	0.0063	14.71	0.00
Zirconium	mg/L	0.0001	0.0001	0.0001	0.00026	0.0001	88.89	0.00	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Dissolved Metals														
Aluminum	mg/L	0.003	0.003	0.003	0.122	0.124	1.63	0.00	0.003	0.003	0.168	0.165	1.80	0.00
Antimony	mg/L	0.0005	0.0005	0.0005	0.00076	0.00077	1.31	0.00	0.0005	0.0005	0.00096	0.00096	0.00	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0178	0.0178	0.00	0.00	0.0001	0.0001	0.017	0.017	0.00	0.00

QAQC MEL-12 Parameter	Sample Date		6/20/2022						7/18/2022					
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Barium	mg/L	0.001	0.001	0.001	0.0311	0.0306	1.62	0.00	0.001	0.001	0.0471	0.045	4.56	0.00
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Bismuth	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.00	0.00
Boron	mg/L	0.05	0.05	0.05	0.189	0.194	2.61	0.00	0.05	0.05	0.26	0.243	6.76	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.000018	0.000012	40.00	0.00	0.00001	0.00001	0.000016	0.000014	13.33	0.00
Calcium (Dissolved)	mg/L	0.05	0.05	-	85.1	83.4	2.02	-	0.05	-	106	102	3.85	-
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.00	0.00
Cobalt	mg/L	0.0002	0.0002	0.0002	0.00125	0.00126	0.80	0.00	0.0002	0.0002	0.00097	0.00098	1.03	0.00
Copper	mg/L	0.0002	0.0002	0.0002	0.00284	0.00287	1.05	0.00	0.0002	0.0002	0.00334	0.00331	0.90	0.00
Iron	mg/L	0.005	0.005	0.005	0.0224	0.0285	23.97	0.00	0.005	0.005	0.0336	0.0336	0.00	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.00035	0.00032	8.96	0.00	0.0002	0.0002	0.0003	0.00029	3.39	0.00
Lithium	mg/L	0.002	0.002	0.002	0.0214	0.0217	1.39	0.00	0.002	0.002	0.0278	0.0267	4.04	0.00
Magnesium (Dissolved)	mg/L	0.05	0.05	-	24.8	24.8	0.00	-	0.05	-	29.8	29.1	2.38	-
Manganese	mg/L	0.001	0.001	0.001	0.0821	0.0822	0.12	0.00	0.001	0.001	0.0444	0.044	0.90	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.0037	0.0039	5.26	0.00	0.001	0.001	0.0052	0.0053	1.90	0.00
Nickel	mg/L	0.001	0.001	0.001	0.0047	0.0046	2.15	0.00	0.001	0.001	0.0039	0.0041	5.00	0.00
Potassium (Dissolved)	mg/L	0.05	0.05	-	13	13	0.00	-	0.05	-	17.1	16.7	2.37	-
Selenium	mg/L	0.0001	0.0001	0.0001	0.00043	0.00044	2.30	0.00	0.0001	0.0001	0.0004	0.0004	0.00	0.00
Silicon	mg/L	0.1	0.1	0.1	0.16	0.15	6.45	0.00	0.1	0.1	0.11	0.11	0.00	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Sodium (Dissolved)	mg/L	0.05	0.05	-	157	155	1.28	-	0.062	-	195	193	1.03	-
Strontium	mg/L	0.001	0.001	0.001	1.03	1.03	0.00	0.00	0.001	0.001	1.34	1.31	2.26	0.00
Sulphur	mg/L	3	3	-	49.1	48.4	1.44	-	3	-	58	57.6	0.69	-
Thallium	mg/L	0.00001	0.00001	0.00001	0.000021	0.000019	10.00	0.00	0.00001	0.00001	0.000029	0.000029	0.00	0.00
Tin	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Titanium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.00179	0.00179	0.00	0.00	0.0001	0.0001	0.00214	0.00211	1.41	0.00
Vanadium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Zirconium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.00	0.00
% Exceedance*							1%	0%					0%	0%

Footnotes:

RPD = Relative Percent Difference; MDL: Method Detection Limit

All value "<DL" have been replaced by "DL".

* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.

Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.

Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.

Italic values correspond to a RPD higher than 20% and for which one of the result is within 10X the MDL and the other one exceeds 10x the MDL.

MEL-13	CCME	Sample date	Annual Average					7/10/2022	7/19/2022	8/20/2022	9/19/2022
Parameter	Guideline	Units	2018	2019	2020	2021	2022	C2I9023	C2K7087	C2O3062	C2R5558
Field Measured											
Temperature		°C	-	10.08	10.26	7.06	13.85	14.79	16.12	16	8.5
pH		pH units	-	7.59	7.69	7.44	7.43	7.78	7.39	7.47	7.07
Conductivity		uS/cm	-	82.20	114.05	105.78	115.2	112	110.3	112.7	125.7
Dissolved oxygen		mg/L	-	11.01	123.60	10.31	11.07	10.3	9.86	9.9	14.21
Dissolved oxygen		%	-	102.68	101.52	101.60	107.5	103.7	102.2	101.3	122.6
Conventional Parameters											
pH	6-9.5	pH units	7.34	7.47	7.32	7.26	7.49	7.51	7.5	7.37	7.56
Turbidity		NTU	0.28	0.20	0.36	0.41	0.3	< 0.1	0.4	0.5	0.3
Specific conductivity		umhos/cm	87.50	84.75	115.71	116.00	115	110	110	110	130
Hardness, as CaCO3		mg/L	140.00	23.40	29.81	30.92	30.0	29.2	29	28.4	33.4
Total alkalinity, as CaCO3		mg/L	16.00	15.50	16.86	18.20	21	22	20	21	21
Carbonate, as CaCO3		mg/L	1.00	1.00	1.00	0.50	0.5	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate, as CaCO3		mg/L	16.00	15.50	16.86	18.00	21	22	20	21	21
TDS		mg/L	147.50	58.75	80.00	75.00	82.50	45	70	65	150
TDS, calculated		mg/L	-	-	-	59.50	57	56	55	55	62
TSS		mg/L	1.00	1.00	1.36	1.30	0.8	1	< 1	1	< 1
Total organic carbon		mg/L	3.00	3.10	3.37	3.50	3.8	3.9	3.5	3.9	3.7
Dissolved organic carbon		mg/L	2.90	2.80	3.36	3.18	3.7	3.9	3.5	3.6	3.6
Major Ions											
Chloride	120	mg/L	-	-	18.21	18.80	18	17	16	17	20
Cyanide		mg/L	0.0050	0.0050	0.0050	0.0025	0.00076	< 0.00050	< 0.00050	< 0.00050	0.00228
Cyanide (free)	0.005	mg/L	-	0.0015	0.0010	0.0033	0.0015	< 0.0020	< 0.0020	0.0031	< 0.0020
Cyanide (WAD)		mg/L	0.0010	0.0010	0.0011	0.0007	0.00049	0.00061	< 0.00050	< 0.00050	0.00084
Silica		mg/L	0.32	0.45	0.33	0.29	0.34	0.2	0.26	0.42	0.47
Sulfate	128	mg/L	4.33	3.63	5.78	6.86	6.9	7.1	6.5	6.4	7.4
Nutrients and Chlorophyll a											
Ammonia Nitrogen (as N)		mg/L	0.09	0.11	0.12	0.03	0.025	< 0.050	< 0.050	< 0.050	< 0.050
Nitrate (as N)	13	mg/L	0.10	0.10	0.11	0.06	0.05	< 0.10	< 0.10	< 0.10	< 0.10
Nitrite (as N)	0.06	mg/L	0.01	0.01	0.01	0.01	0.005	< 0.010	< 0.010	< 0.010	< 0.010
Total Kjeldahl nitrogen		mg/L	0.16	0.22	0.22	0.22	0.21	0.23	0.16	0.24	0.19
Total phosphorus		mg/L	0.020	0.021	0.020	0.014	0.018	0.041	< 0.020	< 0.020	< 0.020
Total phosphorus		mg/L	-	-	0.011	0.009	0.0047	0.0041	0.003	0.0045	0.007
Orthophosphate (P)		mg/L	0.010	0.010	0.010	0.005	0.005	< 0.010	< 0.010	< 0.010	< 0.010
Total Metals											
Aluminum		mg/L	1.66748	0.00695	0.00680	0.00644	0.00399	0.00287	0.0051	0.00326	0.00474
Antimony		mg/L	0.00050	0.00050	0.00002	0.00001	0.000016	< 0.000020	0.000022	< 0.000020	0.00002
Arsenic	0.005	mg/L	0.00104	0.00036	0.00051	0.00048	0.000534	0.000459	0.000464	0.000614	0.000597
Barium		mg/L	0.03745	0.00755	0.00862	0.00914	0.00855	0.00937	0.00807	0.00826	0.0085
Beryllium		mg/L	0.00010	0.00010	0.00001	0.00001	0.000005	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Boron		mg/L	0.07650	0.05000	0.01000	0.00620	0.005	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	0.00006	mg/L	0.000010	0.000010	0.000010	0.000004	0.0000025	< 0.0000050	< 0.0000050	< 0.0000050	< 0.0000050
Chromium		mg/L	0.00100	0.00100	0.00010	0.00005	0.00005	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Cobalt		mg/L	-	0.00020	0.00003	0.00003	0.00002	0.0000259	0.0000148	0.0000262	0.0000266
Copper	0.002	mg/L	0.00128	0.00072	0.00085	0.00085	0.000944	0.00092	0.000995	0.000914	0.000945
Iron	0.3	mg/L	0.11925	0.02825	0.03201	0.02414	0.0209	0.0256	0.0128	0.0283	0.017
Lead	0.001	mg/L	0.00020	0.00020	0.00002	0.00002	0.0000104	0.0000066	0.0000154	0.0000092	0.0000103
Lithium		mg/L	0.03775	0.00200	0.00143	0.00138	0.00110	0.00108	0.00105	0.00109	0.00118
Manganese		mg/L	0.07118	0.00773	0.00777	0.00707	0.00584	0.00839	0.00103	0.00961	0.00433
Mercury	0.000026	mg/L	0.00001	0.00001	0.00001	0.00001	0.000005	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	0.073	mg/L	0.00108	0.00100	0.00012	0.00016	0.000130	0.000131	0.000113	0.000125	0.000149
Nickel	0.025	mg/L	0.00158	0.00100	0.00075	0.00074	0.000765	0.000791	0.000812	0.000714	0.000741

MEL-13 Parameter	CCME Guideline	Sample date Units	Annual Average					7/10/2022	7/19/2022	8/20/2022	9/19/2022
			2018	2019	2020	2021	2022	C2J9023	C2K7087	C2O3062	C2R5558
Selenium	0.001	mg/L	0.00010	0.00010	0.00004	0.00003	0.000050	0.000041	0.000055	0.000042	0.000063
Silver	0.0025	mg/L	0.000020	0.000020	0.000010	0.000003	0.0000025	< 0.0000050	< 0.0000050	< 0.0000050	< 0.0000050
Strontium		mg/L	0.98660	0.04050	0.06401	0.06360	0.0572	0.0553	0.0514	0.0572	0.0648
Thallium	0.0008	mg/L	0.000020	0.000010	0.000002	0.000002	0.0000013	0.000002	< 0.0000020	< 0.0000020	< 0.0000020
Tin		mg/L	0.00500	0.00500	0.00020	0.00010	0.00010	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Titanium		mg/L	0.00500	0.00500	0.00053	0.00039	0.00025	< 0.00050	< 0.00050	< 0.00050	< 0.00050
Uranium	0.015	mg/L	0.00032	0.00010	0.00002	0.00003	0.0000262	0.0000253	0.0000238	0.0000229	0.0000329
Vanadium		mg/L	0.00500	0.00500	0.00020	0.00010	0.00010	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Zinc	0.03	mg/L	0.00643	0.00500	0.00045	0.00077	0.00076	0.00083	0.00078	0.00057	0.00085
Dissolved Metals											
Aluminum		mg/L	0.00785	0.00300	0.00452	0.00262	0.00241	0.0017	0.00312	0.00232	0.0025
Antimony		mg/L	0.00050	0.00050	0.00002	0.00001	0.000013	< 0.000020	< 0.000020	< 0.000020	0.00002
Arsenic	0.005	mg/L	0.00036	0.00034	0.00048	0.00045	0.000511	0.000411	0.000496	0.000567	0.000569
Barium		mg/L	0.00763	0.00728	0.00853	0.00885	0.00850	0.00887	0.00882	0.0081	0.0082
Beryllium		mg/L	0.00010	0.00010	0.00001	0.00001	0.00001	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Boron		mg/L	0.05000	0.05000	0.01000	0.00780	0.008	< 0.01	0.016	< 0.01	< 0.01
Cadmium	0.00006	mg/L	0.000010	0.000010	0.000010	0.000003	0.0000025	< 0.0000050	< 0.0000050	< 0.0000050	< 0.0000050
Calcium (Dissolved)		mg/L	7.47500	7.06500	9.10714	9.13800	9.46	9.1	9.53	9.2	10
Chromium		mg/L	0.00100	0.00100	0.00010	0.00006	0.00005	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Cobalt		mg/L	-	0.00020	0.00002	0.00002	0.0000175	0.0000144	0.0000271	0.000013	0.0000155
Copper	0.002	mg/L	0.00072	0.00087	0.00080	0.00081	0.000922	0.000889	0.000937	0.000958	0.000905
Iron	0.3	mg/L	0.00833	0.00798	0.01026	0.00612	0.0105	0.0086	0.0245	0.0063	0.0027
Lead	0.001	mg/L	0.000200	0.000200	0.000010	0.000004	0.0000035	< 0.0000050	< 0.0000050	0.0000063	< 0.0000050
Lithium		mg/L	0.00200	0.00200	0.00147	0.00128	0.00109	0.00103	0.00114	0.00099	0.00119
Magnesium (Dissolved)		mg/L	1.30750	1.27250	1.76929	1.81000	1.79	1.65	1.79	1.76	1.95
Manganese		mg/L	0.00105	0.00480	0.00127	0.00078	0.00242	0.00109	0.00788	0.000267	0.00043
Mercury	0.000026	mg/L	0.00001	0.00001	0.00001	0.00001	0.000005	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	0.073	mg/L	0.00100	0.00385	0.00013	0.00015	0.000133	0.00011	0.000098	0.000145	0.00018
Nickel	0.025	mg/L	0.00100	0.00100	0.00072	0.00070	0.000744	0.000717	0.000805	0.000737	0.000716
Potassium (Dissolved)		mg/L	0.93750	0.92750	1.13714	1.12080	1.13	1.11	1.08	1.12	1.2
Selenium	0.001	mg/L	0.00010	0.00010	0.00004	0.00004	0.000032	0.000045	< 0.000040	< 0.000040	0.000042
Silver	0.0025	mg/L	0.000020	0.000020	0.000010	0.000003	0.0000025	< 0.0000050	< 0.0000050	< 0.0000050	< 0.0000050
Sodium (Dissolved)		mg/L	5.41000	5.09000	7.86714	8.14000	7.69	7.01	7.65	7.09	8.99
Strontium		mg/L	0.04910	0.04045	0.06476	0.06206	0.0571	0.0539	0.0551	0.0561	0.0632
Thallium	0.0008	mg/L	0.000010	0.000010	0.000002	0.000001	0.0000013	< 0.0000020	0.000002	< 0.0000020	< 0.0000020
Tin		mg/L	0.00500	0.00500	0.00020	0.00010	0.00010	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Titanium		mg/L	0.00500	0.00500	0.00053	0.00025	0.00025	< 0.00050	< 0.00050	< 0.00050	< 0.00050
Uranium	0.015	mg/L	0.00010	0.00010	0.00002	0.00003	0.0000241	0.0000237	0.000023	0.0000197	0.0000298
Vanadium		mg/L	0.00500	0.00500	0.00020	0.00010	0.00010	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Zinc	0.03	mg/L	0.00500	0.00500	0.00052	0.00088	0.00132	0.00033	< 0.00010	0.00075	0.00414
Radionuclides											
Radium-226		Bq/l	0.0050	0.0050	0.0059	0.0025	0.0025	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Volatile Organics											
Benzene	0.37	mg/L	0.0002	0.0002	0.0002	0.0001	0.00010	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Ethylbenzene	0.09	mg/L	0.0002	0.0002	0.0002	0.0001	0.00010	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Toluene	0.002	mg/L	0.0002	0.0002	0.0002	0.0003	0.00010	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Xylenes		mg/L	0.0004	0.0004	0.0004	0.0002	0.00020	< 0.00040	< 0.00040	< 0.00040	< 0.00040
m,p-Xylenes		mg/L	0.0004	0.0004	0.0004	0.0002	0.00020	< 0.00040	< 0.00040	< 0.00040	< 0.00040
o-Xylene		mg/L	0.0002	0.0002	0.0002	0.0001	0.00010	< 0.00020	< 0.00020	< 0.00020	< 0.00020
F1 (C6-C10)-BTEX		mg/L	0.0250	0.0250	0.0250	0.0125	0.0125	< 0.025	< 0.025	< 0.025	< 0.025
F1 (C6-C10)		mg/L	0.0250	0.0250	0.0250	0.0125	0.0125	< 0.025	< 0.025	< 0.025	< 0.025
F2 (C10-C16)		mg/L	0.1000	0.1000	0.1000	0.0500	0.05	< 0.1	< 0.1	< 0.1	< 0.1

MEL-13	CCME	Sample date	Annual Average					7/10/2022	7/19/2022	8/20/2022	9/19/2022
Parameter	Guideline	Units	2018	2019	2020	2021	2022	C2J9023	C2K7087	C2O3062	C2R5558
F3 (C16-C34)		mg/L	0.2000	0.2000	0.2000	0.1000	0.1	< 0.2	< 0.2	< 0.2	< 0.2
F4 (C34-C50)		mg/L	0.2000	0.2000	0.2000	0.1000	0.1	< 0.2	< 0.2	< 0.2	< 0.2

MEL-14 Parameter	MDMER MAX GRAB	MDMER MAX MEAN	MEL-14 MAX GRAB	MEL-14 MAX MEAN	Sample date Unit	Annual Average					7/4/2022	7/11/2022	7/18/2022	7/25/2022	8/1/2022	8/29/2022	9/5/2022	9/12/2022	9/19/2022	9/24/2022
						2018	2019	2020	2021	2022	C218287	C219013	C26021	C2L2068	C2L8620	C2P2700	C2P395	C2Q7734	C2R3392	C2S2411
Field Measured																				
Temperature					°C	-	13.12	10.79	9.59	12.7	14.8	18.8	15.9	18.6	11.1	8.1	10.8	10.3	9.4	9.1
pH	6.0-9.5	6.0-9.5			pH units	-	7.22	7.10	7.24	7.29	7.18	7.29	7.2	7.35	7.28	7.22	7.16	7.06	7.24	7.87
Conductivity					µS/cm	-	1929.44	3506.00	2644.62	2,451	1741	1816	2069	2042	2168	2619	2546	2802	3267	3440
Dissolved oxygen					mg/L	-	9.17	11.91	11.13	10.64	8.19	8.2	9.73	7.32	12.58	13.09	9.15	-	13.25	14.21
Dissolved oxygen					%	-	82.40	93.87	92.08	96.5	81.3	88.5	99	78.8	115.1	111.7	84.2	70.9	118.5	117
Conventional Parameters																				
pH	6.0-9.5	6.0-9.5	6.0-9.5	6.0-9.5	pH units	7.22	7.46	7.47	7.62	7.61	7.41	7.75	7.67	7.17	7.62	7.77	7.71	7.77	7.6	7.65
Turbidity					NTU	0.81	1.94	0.90	0.45	0.6	0.8	0.8	0.7	0.6	0.6	0.5	0.5	0.4	0.5	0.7
Specific conductivity					µmhos/cm	1854.55	1905.56	3432.00	2605.88	2,430	1700	1800	2000	2000	2200	2400	2500	2800	3300	3600
Hardness, as CaCO3					mg/L	421.11	362.00	782.61	571.65	490	342	362	403	409	408	457	493	571	722	737
Total alkalinity, as CaCO3					mg/L	33.03	29.86	70.28	67.18	61	52	60	55	34	62	69	68	73	68	67
Carbonate, as CaCO3					mg/L	0.50	0.50	0.50	0.50	0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bicarbonate, as CaCO3					mg/L	32.93	29.79	70.04	66.88	61	52	59	54	34	61	69	68	73	68	67
TDS					mg/L	1130.00	1171.39	2075.60	1607.94	1,423	1120	1070	1160	1150	1270	1410	1380	1590	2050	2030
TDS, calculated			4500	3500	mg/L	-	-	-	1470.00	1,321	940	970	1000	1100	1200	1300	1400	1500	1800	2000
TSS	30	15	30	15	mg/L	9.23	3.39	4.96	3.29	3	4	3	3	2	2	3	3	3	3	4
Total organic carbon					mg/L	7.99	6.96	10.10	8.42	8.4	6.9	7.2	7.2	7.9	8.9	9	8.7	8.3	9.8	10
Dissolved organic carbon					mg/L	6.61	6.24	9.47	7.71	7.8	6.2	6.8	6.2	6.9	8.6	8.7	8.2	8.2	9.3	8.9
Major Ions																				
Chloride					mg/L	481.82	473.57	886.80	635.29	568	380	410	440	470	510	570	630	640	790	840
Cyanide	1	0.5	1	0.5	mg/L	0.00	175.13	0.00	0.00	0.00146	0.00113	0.00074	0.00088	0.00108	0.00108	0.00122	0.00271	0.00253	0.00108	0.00212
Cyanide (free)					mg/L	-	0.00	0.01	0.00	0.00019	0.00037	0.003	<0.0020	<0.0020	0.0041	0.0023	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide (WAD)					mg/L	0.00	0.00	0.00	0.00	0.00112	0.001	0.00074	0.00063	0.00082	0.00095	0.00068	0.0016	0.0022	0.0015	0.0011
Silica					mg/L	0.53	0.87	2.49	0.63	0.377	<0.050	0.072	0.14	0.27	0.16	0.14	0.75	1.1	0.89	1
Sulfate					mg/L	46.11	63.29	192.40	224.12	221	170	170	180	150	200	210	230	250	310	340
Nutrients and Chlorophyll a																				
Ammonia Nitrogen (as N)			18	14	mg/L	1.57	3.84	3.48	0.86	0.332	0.23	0.26	0.084	0.17	0.21	<0.050	0.097	0.72	1.5	<0.050
Un-ionized Ammonia, calculated	1	0.5			mg/L	-	-	-	-	0.0015	0.0012	0.0022	<0.00061	0.0016	0.00099	<0.00061	<0.00061	0.0019	0.0056	0.00063
Nitrate (as N)					mg/L	5.47	12.67	16.35	13.89	9.03	10.2	9.19	7.7	6.6	6.37	3.63	5.12	10.1	14.7	16.7
Nitrite (as N)					mg/L	0.21	0.50	0.27	0.26	0.221	0.158	0.196	0.224	0.302	0.285	0.046	0.099	0.304	0.408	0.186
Total Kjeldahl nitrogen					mg/L	2.03	4.13	4.35	1.37	0.98	0.9	1.1	0.53	0.91	0.85	1.4	0.85	1.3	1.7	1.8
Total phosphorus			4	2	mg/L	0.04	0.02	0.03	0.03	0.024	0.061	0.038	<0.020	<0.020	0.031	0.023	<0.020	<0.020	<0.020	0.025
Orthophosphate (P)					mg/L	0.01	0.01	0.01	0.01	0.006	<0.010	0.012	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Total Metals																				
Aluminum			3	2	mg/L	1.20130	0.23849	0.56161	0.38812	0.373	0.403	0.31	0.358	0.373	0.302	0.326	0.389	0.382	0.355	0.528
Antimony					mg/L	0.00025	0.00024	0.00089	0.00078	0.00082	0.00078	0.00087	0.00088	0.00101	0.0009	0.00079	0.00081	0.00076	0.00091	<0.0010
Arsenic	0.6	0.3	0.6	0.3	mg/L	0.00171	0.00169	0.01532	0.00462	0.00503	0.00681	0.00571	0.00676	0.00454	0.00478	0.00456	0.00476	0.00408	0.00307	
Barium					mg/L	0.10743	0.05624	0.11308	0.06804	0.0555	0.0358	0.0409	0.0456	0.0485	0.0507	0.054	0.0599	0.0627	0.0782	0.0786
Beryllium					mg/L	0.00005	0.00006	0.00011	0.00006	0.00006	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020
Boron					mg/L	0.22310	0.29215	0.37322	0.31453	0.293	0.205	0.21	0.243	0.269	0.275	0.301	0.309	0.384	0.359	0.37
Cadmium					mg/L	0.00001	0.00002	0.00003	0.00002	0.000012	<0.000014	0.000019	0.000014	<0.000010	0.000012	0.000011	<0.000010	0.000013	0.000018	<0.000020
Chromium					mg/L	0.00050	0.00064	0.00111	0.00065	0.00066	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0020
Cobalt					mg/L	0.00066	0.00052	0.00177	0.00138	0.00094	0.00111	0.001	0.00096	0.00095	0.00095	0.00099	0.00101	0.00084	0.00103	0.00094
Copper	0.6	0.3	0.4	0.2	mg/L	0.00119	0.00094	0.00193	0.00197	0.00253	0.00019	0.00288	0.00255	0.00244	0.00264	0.00249	0.00257	0.00246	0.00221	0.0021
Iron					mg/L	0.13130	0.28057	0.07448	0.02859	0.019	0.034	0.023	0.033	0.022	0.012	0.011	0.01	0.021	0.015	<0.020
Lead	0.2	0.1	0.2	0.1	mg/L	0.00014	0.00015	0.00027	0.00015	0.00011	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00040
Lithium					mg/L	0.12867	0.06372	0.09250	0.04179	0.0316	0.023	0.028	0.028	0.0302	0.0308	0.0309	0.031	0.0326	0.0404	0.0442
Manganese					mg/L	0.19980	0.03345	0.50993	0.16481	0.0450	0.0522	0.0657	0.0353	0.0192	0.0919	0.0171	0.0588	0.0591	0.0331	
Mercury					mg/L	0.00001	0.00001	0.00001	0.00001	0.000005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum					mg/L	0.00111	0.00138	0.00364	0.00487	0.0055	0.0041	0.0044	0.0052	0.0058	0.0065	0.0061	0.0059	0.0065	0.0058	0.0054
Nickel	1	0.5	1	0.5	mg/L	0.00244	0.00307	0.00630	0.00583	0.0045	0.004	0.0039	0.0037	0.0037	0.0042	0.004	0.0043	0.0049	0.0065	0.0059
Selenium					mg/L	0.00005	0.00010	0.00043	0.00095	0.00044	0.00043	0.00041	0.00043	0.00044	0.00044	0.00026	0.0003	0.00048	0.00065	0.00063
Silver					mg/L	0.00001	0.00001	0.00002	0.00001	0.000011	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.00040
Strontium					mg/L	2.70910	1.97071	3.88348	2.08176	1.68	1.39	1.19	1.35	1.42	1.4	1.63	1.69	2.51	2.49	2.9
Thallium					mg/L	0.00002	0.00002	0.00003	0.00003	0.000030	0.000024	0.000027	0.000031	0.000032	0.000025	0.000028	0.000028	0.000033	0.000037	0.00003
Tin					mg/L	0.00250	0.00221	0.00554	0.00224	0.0028	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010
Titanium					mg/L	0.00250	0.00321	0.00554	0.00324	0.0028	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010
Uranium					mg/L	0.00019	0.00025	0.00115	0.00130	0.00128	0.00106	0.00078	0.00036	0.00028	0.00123	0.0014	0.00129	0.002	0.00262	0.00174
Vanadium					mg/L															

QAQC MEL-14 Parameter	Sample Date		7/4/2022						9/19/2022					
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters														
pH	pH units		6.14	-	7.43	7.41	0.27	-	5.63	-	7.54	7.6	0.79	-
Dissolved Oxygen	mg/L		9.2	-	9.21	9	2.31	-	9.49	-	10	9.87	1.31	-
Turbidity	NTU	0.1	0.1	0.1	0.9	0.8	11.76	0.00	0.1	0.1	0.5	0.5	0.00	0.00
Specific conductivity	umhos/cm	1	2.1	1	1700	1700	0.00	70.97	1.1	1	3300	3300	0.00	9.52
Hardness, as CaCO3	mg/L	0.5	0.5	-	347	342	1.45	-	0.5	-	724	722	0.28	-
Hardness, as CaCO3 (dissolved)	mg/L	0.5	0.5	-	362	356	1.67	-	0.5	-	699	701	0.29	-
Total alkalinity, as CaCO3	mg/L	1	1	1	51	52	1.94	0.00	1	1	75	68	9.79	0.00
Carbonate, as CaCO3	mg/L	1	1	-	1	1	0.00	-	1	-	1	1	0.00	-
Bicarbonate, as CaCO3	mg/L	1	1	-	50	52	3.92	-	1	-	75	68	9.79	-
TDS	mg/L	10	10	10	1120	1120	0.00	0.00	10	10	2020	2050	1.47	0.00
TDS, calculated	mg/L	1	1	-	930	940	1.07	-	1	-	1800	1800	0.00	-
TSS	mg/L	1	1	1	4	4	0.00	0.00	1	1	3	3	0.00	0.00
Total organic carbon	mg/L	0.4	0.4	0.4	6.8	6.9	1.46	0.00	0.4	0.4	9.8	9.8	0.00	0.00
Dissolved organic carbon	mg/L	0.4	0.56	0.4	6.4	6.2	3.17	33.33	0.4	0.4	9.1	9.3	2.17	0.00
Major Ions														
Chloride	mg/L	1	1	1	370	380	2.67	0.00	1	1	800	790	1.26	0.00
Cyanide	mg/L	0.0005	0.0005	0.0005	0.00124	0.00113	9.28	0.00	0.0005	0.0005	0.00065	0.00108	49.71	0.00
Cyanide (free)	mg/L	0.002	0.0022	0.002	0.002	0.0037	59.65	9.52	0.002	0.002	0.0022	0.002	9.52	0.00
Cyanide (WAD)	mg/L	0.0005	0.0005	0.0005	0.0012	0.001	18.18	0.00	0.00086	0.0005	0.0016	0.0015	6.45	52.94
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00	0.1	0.1	0.1	0.1	0.00	0.00
Silica	mg/L	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.05	0.05	1.1	1.1	0.00	0.00
Sulfate	mg/L	0.5	0.5	0.5	160	170	6.06	0.00	0.53	0.5	310	310	0.00	5.83
Nutrients and Chlorophyll a														
Ammonia Nitrogen (as N)	mg/L	0.05	0.05	0.05	0.18	0.23	24.39	0.00	0.05	0.05	0.58	1.5	88.46	0.00
Un-ionized Ammonia, calculated	mg/L	0.02	-	-	0.00088	0.0012	30.77	-	-	-	0.0022	0.0056	87.18	-
Nitrate (as N)	mg/L	0.1	0.1	0.1	10.3	10.2	0.98	0.00	0.1	0.1	14.9	14.7	1.35	0.00
Nitrite (as N)	mg/L	0.01	0.01	0.01	0.149	0.158	5.86	0.00	0.01	0.01	0.418	0.408	2.42	0.00
Nitrate + nitrite (as N)	mg/L	0.1	0.1	-	10.5	10.4	0.96	-	0.1	-	15.3	15.1	1.32	-
Total Kjeldahl nitrogen	mg/L	0.1	0.1	0.1	0.88	0.9	2.25	0.00	0.14	0.1	1.4	1.3	7.41	33.33
Biochemical Oxygen Demand, 5 Day	mg/L	2	2	2	2	3	40.00	0.00	2	2	2	2	0.00	0.00
Total phosphorus	mg/L	0.02	0.02	0.02	0.033	0.061	59.57	0.00	0.02	0.02	0.024	0.025	4.08	0.00
Orthophosphate (P)	mg/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.00
Total Metals														
Aluminum	mg/L	0.003	0.003	0.003	0.402	0.403	0.25	0.00	0.003	0.003	0.353	0.355	0.56	0.00
Antimony	mg/L	0.0005	0.0005	0.0005	0.00082	0.00078	5.00	0.00	0.0005	0.0005	0.00095	0.00091	4.30	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.00701	0.00681	2.89	0.00	0.0001	0.0001	0.00407	0.00408	0.25	0.00
Barium	mg/L	0.001	0.001	0.001	0.0367	0.0358	2.48	0.00	0.001	0.001	0.079	0.0782	1.02	0.00
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Bismuth	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.00	0.00
Boron	mg/L	0.05	0.05	0.05	0.207	0.205	0.97	0.00	0.05	0.05	0.368	0.359	2.48	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.000014	0.000014	0.00	0.00	0.00001	0.00001	0.000018	0.000018	0.00	0.00
Calcium (total)	mg/L	0.05	0.05	-	95.7	93.8	2.01	-	0.05	-	205	205	0.00	-
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.00	0.00
Cobalt	mg/L	0.0002	0.0002	0.0002	0.00112	0.00111	0.90	0.00	0.0002	0.0002	0.00103	0.00103	0.00	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.00295	0.00294	0.34	0.00	0.0005	0.0005	0.00218	0.00221	1.37	0.00
Iron	mg/L	0.01	0.01	0.01	0.028	0.034	19.35	0.00	0.01	0.01	0.016	0.015	6.45	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Lithium	mg/L	0.002	0.002	0.002	0.0232	0.023	0.87	0.00	0.002	0.002	0.0425	0.0404	5.07	0.00
Magnesium (total)	mg/L	0.05	0.05	-	26.2	26.2	0.00	-	0.05	-	51.3	50.7	1.18	-
Manganese	mg/L	0.001	0.001	0.001	0.0525	0.0522	0.57	0.00	0.001	0.001	0.0596	0.0591	0.84	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.0041	0.0041	0.00	0.00	0.001	0.001	0.0059	0.0058	1.71	0.00
Nickel	mg/L	0.001	0.001	0.001	0.0041	0.004	2.47	0.00	0.001	0.001	0.0064	0.0065	1.55	0.00
Potassium (total)	mg/L	0.05	0.05	-	14.3	14.2	0.70	-	0.05	-	27.5	26.9	2.21	-
Selenium	mg/L	0.0001	0.0001	0.0001	0.00045	0.00043	4.55	0.00	0.0001	0.0001	0.00063	0.00065	3.12	0.00
Silicon	mg/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00	0.1	0.1	0.52	0.5	3.92	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Sodium (total)	mg/L	0.05	0.05	-	172	171	0.58	-	0.05	-	345	343	0.58	-
Strontium	mg/L	0.001	0.001	0.001	1.11	1.09	1.82	0.00	0.001	0.001	2.57	2.51	2.36	0.00
Sulphur	mg/L	3	3	-	48.4	50	3.25	-	3	-	109	105	3.74	-
Thallium	mg/L	0.00001	0.00001	0.00001	0.000024	0.000024	0.00	0.00	0.00001	0.00001	0.000037	0.000037	0.00	0.00
Tin	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00

QAQC MEL-14 Parameter	Sample Date		7/4/2022						9/19/2022					
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Titanium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.0011	0.00106	3.70	0.00	0.0001	0.0001	0.00263	0.00262	0.38	0.00
Vanadium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Zirconium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Dissolved Metals														
Aluminum	mg/L	0.003	0.003	0.003	0.144	0.153	6.06	0.00	0.003	0.003	0.112	0.109	2.71	0.00
Antimony	mg/L	0.0005	0.0005	0.0005	0.00086	0.00087	1.16	0.00	0.0005	0.0005	0.001	0.00089	11.64	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.00526	0.00537	2.07	0.00	0.0001	0.0001	0.00275	0.00286	3.92	0.00
Barium	mg/L	0.001	0.001	0.001	0.0388	0.0384	1.04	0.00	0.001	0.001	0.0763	0.0755	1.05	0.00
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0002	0.0001	66.67	0.00
Bismuth	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.002	0.001	66.67	0.00
Boron	mg/L	0.05	0.05	0.05	0.205	0.202	1.47	0.00	0.05	0.05	0.41	0.386	6.03	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00002	0.000019	5.13	0.00	0.00001	0.00001	0.000021	0.000015	33.33	0.00
Calcium (Dissolved)	mg/L	0.05	0.05	-	96.5	95.7	0.83	-	0.05	-	192	195	1.55	-
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.002	0.001	66.67	0.00
Cobalt	mg/L	0.0002	0.0002	0.0002	0.00112	0.00111	0.90	0.00	0.0002	0.0002	0.00105	0.00105	0.00	0.00
Copper	mg/L	0.0002	0.0002	0.0002	0.00306	0.0027	12.50	0.00	0.0002	0.0002	0.00236	0.00224	5.22	0.00
Iron	mg/L	0.005	0.005	0.005	0.0102	0.0115	11.98	0.00	0.005	0.005	0.01	0.0056	56.41	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0004	0.0002	66.67	0.00
Lithium	mg/L	0.002	0.002	0.002	0.021	0.0203	3.39	0.00	0.002	0.002	0.0394	0.0381	3.35	0.00
Magnesium (Dissolved)	mg/L	0.05	0.05	-	29.4	28.4	3.46	-	0.05	-	53.1	52.3	1.52	-
Manganese	mg/L	0.001	0.001	0.001	0.0485	0.0486	0.21	0.00	0.001	0.001	0.0602	0.0591	1.84	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.0044	0.0045	2.25	0.00	0.001	0.001	0.0053	0.0056	5.50	0.00
Nickel	mg/L	0.001	0.001	0.001	0.004	0.0041	2.47	0.00	0.001	0.001	0.0067	0.0066	1.50	0.00
Potassium (Dissolved)	mg/L	0.05	0.05	-	15.2	15.1	0.66	-	0.05	-	26.9	26.1	3.02	-
Selenium	mg/L	0.0001	0.0001	0.0001	0.00045	0.00044	2.25	0.00	0.0001	0.0001	0.00059	0.00063	6.56	0.00
Silicon	mg/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00	0.1	0.1	0.46	0.45	2.20	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00	0.00002	0.00002	0.00004	0.00002	66.67	0.00
Sodium (Dissolved)	mg/L	0.05	0.05	-	186	182	2.17	-	0.05	-	349	346	0.86	-
Strontium	mg/L	0.001	0.001	0.001	1.2	1.21	0.83	0.00	0.001	0.001	2.3	2.34	1.72	0.00
Sulphur	mg/L	3	3	-	55.6	56.6	1.78	-	3	-	105	105	0.00	-
Thallium	mg/L	0.00001	0.00001	0.00001	0.000024	0.000024	0.00	0.00	0.00001	0.00001	0.000041	0.000038	7.59	0.00
Tin	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.01	0.005	66.67	0.00
Titanium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.01	0.005	66.67	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.001	0.001	0.00	0.00	0.0001	0.0001	0.00247	0.00255	3.19	0.00
Vanadium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.01	0.005	66.67	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.01	0.005	66.67	0.00
Zirconium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0002	0.0001	66.67	0.00
Radionuclides														
Radium-226	Bq/l	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.01	0.009	10.53	0.00
Volatile Organics														
Benzene	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Ethylbenzene	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Toluene	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Xylenes	mg/L	0.0004	0.0004	0.0004	0.00085	0.00049	53.73	0.00	0.0004	0.0004	0.0004	0.0004	0.00	0.00
m,p-Xylenes	mg/L	0.0004	0.0004	0.0004	0.00064	0.00049	26.55	0.00	0.0004	0.0004	0.0004	0.0004	0.00	0.00
o-Xylene	mg/L	0.0002	0.0002	0.0002	0.00021	0.0002	4.88	0.00	0.0002	0.0002	0.0002	0.0002	0.00	0.00
F1 (C6-C10)-BTEX	mg/L	0.025	0.025	0.025	0.025	0.025	0.00	0.00	0.025	0.025	0.025	0.025	0.00	0.00
F1 (C6-C10)	mg/L	0.025	0.025	0.025	0.025	0.025	0.00	0.00	0.025	0.025	0.025	0.025	0.00	0.00
F2 (C10-C16)	mg/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00	0.1	0.1	0.1	0.1	0.00	0.00
F3 (C16-C34)	mg/L	0.2	0.2	0.2	0.2	0.2	0.00	0.00	0.2	0.2	0.2	0.2	0.00	0.00
F4 (C34-C50)	mg/L	0.2	0.2	0.2	0.2	0.2	0.00	0.00	0.2	0.2	0.2	0.2	0.00	0.00
% Exceedance*							0%	0%					1%	0%

Footnotes:

RPD = Relative Percent Difference; MDL: Method Detection Limit

All value "<DL" have been replaced by "DL".

* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.

Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.

Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.

Italic values correspond to a RPD higher than 20% and for which one of the result is within 10X the MDL and the other one exceeds 10x the MDL.

MEL-15	CCME	Sample date	Annual Average					5/29/2022	6/19/2022	7/17/2022	8/8/2022	9/11/2022	10/2/2022
Parameter	Guideline	Unit	2018	2019	2020	2021	2022	C2F1292	C2H5667	C2K5741	C2N1410	C2Q7488	C2T0554
Field Measured													
Temperature		°C	-	9.22	14.10	7.98	10.53	6.9	9.4	14.9	17.3	6.8	7.88
pH	6-9.5	pH units	-	7.57	8.11	7.79	7.52	7.01	7.44	7.43	8.31	7.39	-
Conductivity		uS/cm	-	104.43	102.73	342.32	133.4	138.5	119.1	148	121.2	114.1	159.2
Dissolved oxygen		mg/L	-	10.62	10.72	26.80	10.59	11.37	10.9	8.78	-	11.3	-
Dissolved oxygen		%	-	92.73	102.83	85.56	95.3	93.5	97	86.9	104.6	92.6	96.9
Conventional Parameters													
pH	6-9.5	pH units	7.44	7.62	7.62	7.63	7.62	7.15	7.64	7.83	7.77	7.66	7.66
Turbidity		NTU	0.40	0.38	0.43	0.23	0.6	1	0.2	0.6	0.4	0.4	0.7
Specific conductivity		umhos/cm	97.50	96.50	106.67	120.00	137	120	110	150	130	170	140
Hardness, as CaCO3		mg/L	-	40.23	40.97	43.33	50.1	39.1	41.1	54.6	48.3	64.8	52.7
Total alkalinity, as CaCO3		mg/L	34.50	33.00	35.00	36.83	43	37	38	47	43	48	46
Carbonate, as CaCO3		mg/L	1.00	1.00	1.00	0.50	0.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate, as CaCO3		mg/L	34.00	33.00	34.67	36.50	43	37	38	47	43	48	45
TDS		mg/L	45.00	66.25	75.00	60.00	85	100	55	65	90	115	85
TDS, calculated		mg/L	-	-	-	65.00	70	65	57	73	65	88	72
TSS		mg/L	2.00	1.50	1.00	1.58	1	2	1	1	2	1	1
Total organic carbon		mg/L	8.15	4.80	4.70	4.38	5.0	5.2	4.2	5	4.7	6.3	4.7
Dissolved organic carbon		mg/L	3.95	4.38	4.60	4.35	5	4.1	4	4.9	4.8	5.9	4.7
Major Ions													
Chloride	120	mg/L	7.20	7.25	7.93	10.42	11.3	10	8.6	13	10	14	12
Cyanide		mg/L	0.0050	0.0050	0.0050	0.0025	0.00071	< 0.00050	0.00274	< 0.00050	< 0.00050	< 0.00050	0.00051
Cyanide (free)	0.005	mg/L	0.0010	0.0015	0.0017	0.0020	0.0015	0.0029	< 0.0020	< 0.0020	< 0.0020	< 0.0020	0.0021
Cyanide (WAD)		mg/L	-	0.0010	0.0010	0.0006	0.00079	0.00051	0.0032	< 0.00050	< 0.00050	< 0.00050	< 0.00050
Silica		mg/L	0.70	0.99	1.12	0.63	1.05	0.63	0.28	1	1	2	1.4
Sulfate	128	mg/L	2.45	2.65	5.30	6.23	7.6	8.9	4.7	6.3	4.2	14	7.3
Nutrients and Chlorophyll a													
Ammonia Nitrogen (as N)		mg/L	0.05	0.09	0.20	0.03	0.044	0.081	< 0.050	< 0.050	< 0.050	< 0.050	0.082
Nitrate (as N)	13	mg/L	0.10	0.10	0.10	0.05	0.11	0.23	< 0.22	< 0.10	< 0.10	< 0.10	< 0.10
Nitrite (as N)	0.06	mg/L	0.01	0.01	0.01	0.01	0.005	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total Kjeldahl nitrogen		mg/L	0.35	0.29	0.27	0.24	0.30	0.47	0.25	0.33	0.31	0.25	0.2
Total phosphorus		mg/L	0.02	0.02	0.02	0.02	0.016	0.019	< 0.020	< 0.020	0.035	< 0.020	< 0.020
Orthophosphate (P)		mg/L	0.01	0.01	0.01	0.01	0.005	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total Metals													
Aluminum		mg/L	-	0.00610	0.00467	0.00597	0.0210	0.102	0.0044	0.0039	0.0049	0.0047	0.0063
Antimony		mg/L	-	0.00050	0.00050	0.00025	0.00025	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050
Arsenic	0.005	mg/L	-	0.00090	0.00112	0.00143	0.00277	0.00932	0.00115	0.00173	0.00169	0.00115	0.00115
Barium		mg/L	-	0.01175	0.01237	0.01217	0.0135	0.0146	0.0133	0.0154	0.0107	0.0155	0.0117
Beryllium		mg/L	-	0.00010	0.00010	0.00005	0.00005	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Boron		mg/L	-	0.05000	0.05000	0.02500	0.025	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cadmium	0.00006	mg/L	-	0.00002	0.00001	0.00001	0.000005	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Chromium		mg/L	-	0.00100	0.00100	0.00050	0.0005	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Copper	0.002	mg/L	-	0.00069	0.00083	0.00078	0.00124	0.00129	0.00065	0.00078	0.00073	0.00332	0.00067
Iron	0.3	mg/L	-	0.08675	0.08367	0.07133	0.096	0.167	0.071	0.11	0.096	0.074	0.057
Lead	0.001	mg/L	-	0.00020	0.00020	0.00012	0.00013	0.00028	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Lithium		mg/L	-	0.00200	0.00200	0.00100	0.0010	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Manganese		mg/L	-	0.01290	0.01007	0.00720	0.0128	0.0341	0.0079	0.0106	0.0132	0.0062	0.0048
Mercury	0.000026	mg/L	0.00002	0.00001	0.00001	0.00001	0.000005	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	0.073	mg/L	-	0.00100	0.00100	0.00063	0.0005	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Nickel	0.025	mg/L	-	0.00105	0.00110	0.00072	0.0009	0.0015	< 0.0010	0.001	< 0.0010	0.0015	< 0.0010
Selenium	0.001	mg/L	-	0.00010	0.00010	0.00005	0.00005	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Silver	0.0025	mg/L	-	0.00002	0.00002	0.00001	0.000010	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020
Strontium		mg/L	-	0.06443	0.07053	0.07312	0.0827	0.066	0.0681	0.0933	0.0791	0.108	0.0816
Thallium	0.0008	mg/L	-	0.00001	0.00001	0.00001	0.000005	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Tin		mg/L	-	0.00500	0.00500	0.00250	0.0025	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Titanium		mg/L	-	0.00500	0.00500	0.00250	0.0025	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Uranium	0.015	mg/L	-	0.00010	0.00010	0.00005	0.00005	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Vanadium		mg/L	-	0.00500	0.00500	0.00250	0.0025	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Zinc	0.03	mg/L	-	0.00500	0.00500	0.00378	0.0025	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Dissolved Metals													
Aluminum		mg/L	-	0.00325	0.00317	0.00462	0.0031	0.0083	< 0.0030	< 0.0030	< 0.0030	0.0042	< 0.0030
Antimony		mg/L	-	0.00050	0.00050	0.00025	0.00025	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050
Arsenic	0.005	mg/L	-	0.00078	0.00098	0.00129	0.00240	0.00799	0.00112	0.00154	0.00152	0.00145	0.00076
Barium		mg/L	-	0.01148	0.01230	0.01193	0.0130	0.013	0.0125	0.0151	0.011	0.0152	0.0114

QAQC MEL-15	Sample Date		5/29/2022					
Parameter	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Calcium (total)	mg/L	0.05	0.05	-	13	13.2	1.53	-
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Cobalt	mg/L	0.0002	0.0002	0.0002	0.00024	0.00024	0.00	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.00125	0.00129	3.15	0.00
Iron	mg/L	0.01	0.01	0.01	0.156	0.167	6.81	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.00027	0.00028	3.64	0.00
Lithium	mg/L	0.002	0.002	0.002	0.002	0.002	0.00	0.00
Magnesium (total)	mg/L	0.05	0.05	-	1.51	1.52	0.66	-
Manganese	mg/L	0.001	0.001	0.001	0.0359	0.0341	5.14	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Nickel	mg/L	0.001	0.001	0.001	0.0015	0.0015	0.00	0.00
Potassium (total)	mg/L	0.05	0.05	-	2.23	2.26	1.34	-
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Silicon	mg/L	0.1	0.1	0.1	0.5	0.5	0.00	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Sodium (total)	mg/L	0.05	0.05	-	6.7	6.98	4.09	-
Strontium	mg/L	0.001	0.001	0.001	0.0649	0.066	1.68	0.00
Sulphur	mg/L	3	3	-	3	3.1	3.28	-
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Tin	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Titanium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Vanadium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Zirconium	mg/L	0.0001	0.0001	0.0001	0.00011	0.00012	8.70	0.00
Dissolved Metals								
Aluminum	mg/L	0.003	0.003	0.003	0.0101	0.0083	19.57	0.00
Antimony	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.00805	0.00799	0.75	0.00
Barium	mg/L	0.001	0.001	0.001	0.013	0.013	0.00	0.00
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Bismuth	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Boron	mg/L	0.05	0.05	0.05	0.05	0.05	0.00	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.000028	0.00001	94.74	0.00
Calcium (Dissolved)	mg/L	0.05	0.05	-	12.6	12.6	0.00	-
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Cobalt	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Copper	mg/L	0.0002	0.0002	0.0002	0.00119	0.00095	22.43	0.00

QAQC MEL-15	Sample Date		5/29/2022					
Parameter	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Iron	mg/L	0.005	0.005	0.005	0.0394	0.034	14.71	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Lithium	mg/L	0.002	0.002	0.002	0.002	0.002	0.00	0.00
Magnesium (Dissolved)	mg/L	0.05	0.05	-	1.4	1.41	0.71	-
Manganese	mg/L	0.001	0.001	0.001	0.0296	0.0272	8.45	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Nickel	mg/L	0.001	0.001	0.001	0.0012	0.0012	0.00	0.00
Potassium (Dissolved)	mg/L	0.05	0.05	-	2.15	2.15	0.00	-
Selenium	mg/L	0.0001	0.0001	0.0001	0.00014	0.0001	33.33	0.00
Silicon	mg/L	0.1	0.1	0.1	0.34	0.35	2.90	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Sodium (Dissolved)	mg/L	0.05	0.05	-	6.31	6.48	2.66	-
Strontium	mg/L	0.001	0.001	0.001	0.063	0.0646	2.51	0.00
Sulphur	mg/L	3	3	-	3.1	3.2	3.17	-
Thallium	mg/L	0.00001	0.00001	0.00001	0.000011	0.00001	9.52	0.00
Tin	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Titanium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.00013	0.0001	26.09	0.00
Vanadium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Zirconium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
% Exceedance*							1%	0%

Footnotes:

RPD = Relative Percent Difference; MDL: Method Detection Limit

All value "<DL" have been replaced by "DL".

* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.

Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.

Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.

Italic values correspond to a RPD higher than 20% and for which one of the result is within 10X the MDL and the other one exceeds 10x the MDL.

MEL-16	CCME	Sample date	Annual Average							5/29/2022	6/19/2022	7/17/2022	8/9/2022	9/11/2022	10/2/2022
Parameter	Guideline	Unit	2016	2017	2018	2019	2020	2021	2022	C2F1292	C2H5741	C2K5727	C2N1420	C2Q7508	C2T0558
Field Measured															
Temperature		°C	8.45	-	16.30	9.68	15.03	7.98	9.5	3.9	9.1	15.5	13.6	7.5	7.4
pH	6.5 to 9.0	pH units	8.66	-	8.46	7.64	8.13	7.73	7.63	7.53	7.48	7.53	7.88	7.44	7.92
Conductivity		uS/cm	69.25	-	84.70	79.25	69.57	117.63	159.2	60.5	127.7	141	149.8	125.8	350.1
Dissolved oxygen		mg/L	-	-	-	10.06	10.25	26.30	10.62	10.77	11.01	8.95	-	11.75	-
Dissolved oxygen		%	-	-	-	88.88	99.93	82.33	92.3	82.9	98	89.7	90.4	98.2	94.6
Conventional Parameters															
pH	6.5 to 9.0	pH units	7.59	7.69	7.32	7.43	7.54	7.64	7.50	6.87	7.29	7.61	7.77	7.73	7.7
Turbidity		NTU	0.55	0.80	0.45	0.80	0.50	0.48	0.4	0.3	0.2	0.7	0.5	0.3	0.5
Specific conductivity		umhos/cm	74.50	89.00	89.00	82.75	102.00	118.33	136	63	130	140	150	160	170
Hardness, as CaCO3		mg/L	29.50	32.33	32.65	29.43	36.23	42.83	48.3	22.1	45.4	48.8	52.9	60.9	59.4
Total alkalinity, as CaCO3		mg/L	29.50	32.25	26.00	21.25	24.67	30.67	33	14	31	34	38	39	41
Carbonate, as CaCO3		mg/L	1.00	1.00	1.00	1.00	1.00	0.50	0.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate, as CaCO3		mg/L	29.50	31.75	26.00	21.00	24.67	30.50	33	14	31	34	37	39	41
TDS		mg/L	49.00	66.00	45.00	63.75	76.67	75.00	94.17	70	80	65	120	130	100
TDS, calculated		mg/L	-	-	-	-	-	64.67	65	31	60	66	73	76	82
TSS		mg/L	1.00	1.25	1.00	2.25	2.00	2.00	1	1	1	1	2	2	1
Total organic carbon		mg/L	4.85	4.93	3.95	4.03	4.00	4.23	4.5	3.2	3.9	4.7	5.1	4.6	5.4
Dissolved organic carbon		mg/L	4.80	4.60	3.75	3.53	3.83	4.22	4.1	2.5	3.3	4.5	4.9	4.5	5.1
Major Ions															
Chloride	120	mg/L	3.80	6.73	9.85	10.38	13.33	15.33	17	8	16	18	19	20	21
Cyanide		mg/L	0.0050	0.0050	0.0050	0.0050	0.0050	0.0025	0.00151	< 0.00050	0.00081	0.00083	< 0.00050	0.00665	< 0.00050
Cyanide (free)	0.005	mg/L	0.0010	0.0012	0.0010	0.0010	0.0012	0.0012	0.0014	0.0034	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Cyanide (WAD)		mg/L	0.0050	0.0050	0.0050	0.0012	0.0010	0.0006	0.00112	0.0007	0.00084	< 0.00050	< 0.00050	0.0044	< 0.00050
Silica		mg/L	0.34	0.29	0.22	0.18	0.29	0.33	0.523	0.15	< 0.050	0.33	0.56	1.1	0.97
Sulfate	128	mg/L	1.05	1.28	1.25	1.45	2.37	4.03	4.5	2.2	4	4.5	4.5	5	6.9
Nutrients and Chlorophyll a															
Ammonia Nitrogen (as N)		mg/L	0.01	0.01	0.01	0.12	0.09	0.03	0.033	< 0.050	< 0.050	< 0.050	0.075	< 0.050	< 0.050
Nitrate (as N)	13	mg/L	0.10	0.10	0.10	0.10	0.10	0.05	0.05	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nitrite (as N)	0.06	mg/L	0.10	0.10	0.10	0.01	0.01	0.01	0.005	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total Kjeldahl nitrogen		mg/L	0.30	0.26	0.21	0.20	0.21	0.24	0.22	0.3	0.13	0.28	0.26	0.15	0.21
Total phosphorus		mg/L	0.01	0.01	0.02	0.02	0.02	0.02	0.010	0.01	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Orthophosphate (P)		mg/L	0.01	0.01	0.01	0.01	0.01	0.01	0.005	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total Metals															
Aluminum		mg/L	0.00795	0.01200	0.00665	0.01243	0.01203	0.02493	0.0112	0.0119	0.0069	0.0089	0.0075	0.0212	0.0107
Antimony		mg/L	0.00050	0.00050	0.00050	0.00050	0.00050	0.00025	0.00025	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050
Arsenic	0.005	mg/L	0.00104	0.00105	0.00058	0.00121	0.00294	0.00545	0.00609	0.0101	0.0046	0.00621	0.00619	0.00485	0.00461
Barium		mg/L	0.01405	0.01660	0.08850	0.01598	0.01947	0.02120	0.0212	0.0143	0.0225	0.0228	0.0217	0.0226	0.0233
Beryllium		mg/L	0.00010	0.00010	0.00010	0.00010	0.00010	0.00005	0.00005	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Boron		mg/L	0.05000	0.05000	0.05000	0.05000	0.05000	0.02500	0.025	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cadmium	0.00006	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.000005	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Chromium		mg/L	0.00100	0.00100	0.00100	0.00100	0.00100	0.00050	0.0005	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Copper	0.002	mg/L	0.00097	0.00101	0.00076	0.00078	0.00099	0.00134	0.00111	0.00081	0.00092	0.00118	0.00116	0.00123	0.00133
Iron	0.3	mg/L	0.10600	0.15450	0.08950	0.12375	0.14567	0.11967	0.090	0.081	0.082	0.107	0.084	0.087	0.1
Lead	0.001	mg/L	0.00020	0.00020	0.00020	0.00020	0.00026	0.00038	0.00016	< 0.00020	< 0.00020	0.00025	< 0.00020	0.00033	< 0.00020
Lithium		mg/L	0.00500	0.00500	0.00500	0.00200	0.00200	0.00100	0.0010	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Manganese		mg/L	0.00650	0.01143	0.00830	0.01130	0.00913	0.00797	0.0088	0.0215	0.0055	0.0088	0.0078	0.0044	0.0047
Mercury	0.000026	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.000005	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	0.073	mg/L	0.00100	0.00100	0.00100	0.00100	0.00100	0.00050	0.0005	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Nickel	0.025	mg/L	0.00300	0.00110	0.00100	0.00100	0.00100	0.00060	0.0005	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Selenium	0.001	mg/L	0.00010	0.00010	0.00010	0.00010	0.00010	0.00005	0.00005	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Silver	0.0025	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00001	0.000010	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020
Strontium		mg/L	0.04950	0.05998	0.06100	0.05133	0.06343	0.07083	0.0788	0.0351	0.0765	0.0834	0.09	0.0942	0.0936
Thallium	0.0008	mg/L	0.00005	0.00005	0.00005	0.00001	0.00001	0.00001	0.000006	< 0.000010	< 0.000010	0.000011	< 0.000010	< 0.000010	< 0.000010
Tin		mg/L	0.00500	0.00500	0.00500	0.00500	0.00500	0.00250	0.0025	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Titanium		mg/L	0.00500	0.00500	0.00500	0.00500	0.00500	0.00250	0.0025	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Uranium	0.015	mg/L	0.00010	0.00010	0.00010	0.00010	0.00010	0.00005	0.00005	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Vanadium		mg/L	0.00500	0.00500	0.00500	0.00500	0.00500	0.00250	0.0025	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Zinc	0.03	mg/L	0.00500	0.00500	0.00500	0.00500	0.00500	0.00323	0.0025	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Dissolved Metals															
Aluminum		mg/L	0.00720	0.00493	0.00565	0.00635	0.00523	0.01420	0.0046	0.0048	0.0034	0.0041	0.0055	0.0041	0.0055
Antimony		mg/L	0.00050	0.00050	0.00050	0.00050	0.00050	0.00025	0.00025	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050
Arsenic	0.005	mg/L	0.00091	0.00084	0.00099	0.00092	0.00232	0.00389	0.00522	0.00898	0.00381	0.00521	0.00561	0.0042	0.0035
Barium		mg/L	0.01315	0.01603	0.01600	0.01855	0.01937	0.02078	0.0211	0.0148	0.0213	0.0228	0.0231	0.022	0.0226

QAQC MEL-16 Parameter	Sample Date		6/19/2022						7/17/2022					
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters														
pH	pH units		6.65	-	7.26	7.29	0.41	-	5.72	-	7.7	7.61	1.18	-
Turbidity	NTU	0.1	0.1	0.1	0.3	0.2	40.00	0.00	0.1	0.1	0.6	0.7	15.38	0.00
Specific conductivity	umhos/cm	1	1.1	1	120	130	8.00	9.52	1.1	1	140	140	0.00	9.52
Hardness, as CaCO3	mg/L	0.5	0.5	-	44	45.4	3.13	-	0.5	-	53.6	48.8	9.38	-
Hardness, as CaCO3 (dissolved)	mg/L	0.5	0.5	-	43.7	43.9	0.46	-	0.5	-	48.6	48.3	0.62	-
Total alkalinity, as CaCO3	mg/L	1	1	1	30	31	3.28	0.00	1	1	33	34	2.99	0.00
Carbonate, as CaCO3	mg/L	1	1	-	1	1	0.00	-	1	-	1	1	0.00	-
Bicarbonate, as CaCO3	mg/L	1	1	-	30	31	3.28	-	1	-	33	34	2.99	-
TDS	mg/L	10	10	10	80	80	0.00	0.00	10	10	80	65	20.69	0.00
TDS, calculated	mg/L	1	1	-	59	60	1.68	-	1	-	66	66	0.00	-
TSS	mg/L	1	1	1	1	1	0.00	0.00	1	1	1	1	0.00	0.00
Total organic carbon	mg/L	0.4	0.41	0.4	4	3.9	2.53	2.47	0.4	0.4	4.7	4.7	0.00	0.00
Dissolved organic carbon	mg/L	0.4	0.4	0.4	3.3	3.3	0.00	0.00	0.4	0.4	4.5	4.5	0.00	0.00
Major Ions														
Chloride	mg/L	1	1	1	16	16	0.00	0.00	1	1	18	18	0.00	0.00
Cyanide	mg/L	0.0005	0.0005	0.0005	0.0005	0.00081	47.33	0.00	0.0005	0.0005	0.0005	0.00083	49.62	0.00
Cyanide (free)	mg/L	0.002	0.003	0.002	0.002	0.002	0.00	40.00	0.0022	0.002	0.002	0.002	0.00	9.52
Cyanide (WAD)	mg/L	0.0005	0.00063	0.0005	0.0005	0.00084	50.75	23.01	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00	0.1	0.1	0.1	0.1	0.00	0.00
Silica	mg/L	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.05	0.05	0.3	0.33	9.52	0.00
Sulfate	mg/L	0.5	0.5	0.5	4	4	0.00	0.00	0.5	0.5	4.6	4.5	2.20	0.00
Nutrients and Chlorophyll a														
Ammonia Nitrogen (as N)	mg/L	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.05	0.05	0.05	0.05	0.00	0.00
Nitrate (as N)	mg/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00	0.1	0.1	0.1	0.1	0.00	0.00
Nitrite (as N)	mg/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.00
Nitrate + nitrite (as N)	mg/L	0.1	0.1	-	0.1	0.1	0.00	-	0.1	-	0.1	0.1	0.00	-
Total Kjeldahl nitrogen	mg/L	0.1	0.1	0.1	0.17	0.13	26.67	0.00	0.1	0.1	0.22	0.28	24.00	0.00
Total phosphorus	mg/L	0.02	0.02	0.02	0.02	0.02	0.00	0.00	0.02	0.02	0.02	0.02	0.00	0.00
Orthophosphate (P)	mg/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.00
Total Metals														
Aluminum	mg/L	0.003	0.003	0.003	0.0068	0.0069	1.46	0.00	0.003	0.003	0.0103	0.0089	14.58	0.00
Antimony	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.00446	0.0046	3.09	0.00	0.0001	0.0001	0.00663	0.00621	6.54	0.00
Barium	mg/L	0.001	0.001	0.001	0.0217	0.0225	3.62	0.00	0.001	0.001	0.0247	0.0228	8.00	0.00
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Bismuth	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.00	0.00
Boron	mg/L	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.05	0.05	0.05	0.05	0.00	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Calcium (total)	mg/L	0.05	0.05	-	14.4	14.8	2.74	-	0.141	-	17.5	15.9	9.58	-
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.00	0.00
Cobalt	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.00092	0.00092	0.00	0.00	0.0005	0.0005	0.00125	0.00118	5.76	0.00
Iron	mg/L	0.01	0.01	0.01	0.08	0.082	2.47	0.00	0.01	0.01	0.115	0.107	7.21	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.00025	22.22	0.00
Lithium	mg/L	0.002	0.002	0.002	0.002	0.002	0.00	0.00	0.002	0.002	0.002	0.002	0.00	0.00
Magnesium (total)	mg/L	0.05	0.05	-	1.95	2.04	4.51	-	0.05	-	2.4	2.19	9.15	-
Manganese	mg/L	0.001	0.001	0.001	0.0055	0.0055	0.00	0.00	0.001	0.001	0.0094	0.0088	6.59	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.00	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.00	0.00
Potassium (total)	mg/L	0.05	0.05	-	1.08	1.11	2.74	-	0.05	-	1.38	1.27	8.30	-
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Silicon	mg/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00	0.1	0.1	0.2	0.18	10.53	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Sodium (total)	mg/L	0.05	0.364	-	3.84	3.95	2.82	-	0.05	-	4.7	4.35	7.73	-
Strontium	mg/L	0.001	0.001	0.001	0.0737	0.0765	3.73	0.00	0.001	0.001	0.0914	0.0834	9.15	0.00
Sulphur	mg/L	3	3	-	3	3	0.00	-	3	-	3	3	0.00	-
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.000011	9.52	0.00
Tin	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Titanium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Vanadium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00

QAQC MEL-16 Parameter	Sample Date		6/19/2022						7/17/2022					
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Zirconium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Dissolved Metals														
Aluminum	mg/L	0.003	0.003	0.003	0.0035	0.0034	2.90	0.00	0.003	0.003	0.0043	0.0041	4.76	0.00
Antimony	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.00375	0.00381	1.59	0.00	0.0001	0.0001	0.0051	0.00521	2.13	0.00
Barium	mg/L	0.001	0.001	0.001	0.021	0.0213	1.42	0.00	0.001	0.001	0.0223	0.0228	2.22	0.00
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Bismuth	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	-	-	-	-	-	-
Boron	mg/L	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.05	0.05	0.05	0.05	0.00	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Calcium (Dissolved)	mg/L	0.05	0.05	-	14.3	14.3	0.00	-	0.159	0.05	16	16	0.00	104.31
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.00	0.00
Cobalt	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	-	-	-	-	-	-
Copper	mg/L	0.0002	0.0002	0.0002	0.00088	0.00091	3.35	0.00	0.0002	0.0002	0.00103	0.00105	1.92	0.00
Iron	mg/L	0.005	0.005	0.005	0.0466	0.0489	4.82	0.00	0.005	0.005	0.0448	0.0475	5.85	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Lithium	mg/L	0.002	0.002	0.002	0.002	0.002	0.00	0.00	0.002	0.002	0.002	0.002	0.00	0.00
Magnesium (Dissolved)	mg/L	0.05	0.05	-	1.96	1.96	0.00	-	0.05	0.05	2.11	2.04	3.37	0.00
Manganese	mg/L	0.001	0.001	0.001	0.0039	0.0039	0.00	0.00	0.001	0.001	0.0016	0.0015	6.45	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.00	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.00	0.00
Potassium (Dissolved)	mg/L	0.05	0.05	-	1.06	1.07	0.94	-	0.05	-	1.26	1.33	5.41	-
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Silicon	mg/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00	0.1	0.1	0.17	0.17	0.00	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Sodium (Dissolved)	mg/L	0.05	0.05	-	3.77	3.81	1.06	-	0.05	-	4.17	4.29	2.84	-
Strontium	mg/L	0.001	0.001	0.001	0.0733	0.0739	0.82	0.00	0.001	0.001	0.0826	0.0846	2.39	0.00
Sulphur	mg/L	3	3	-	3	3	0.00	-	3	-	3	3	0.00	-
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Tin	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Titanium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Vanadium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Zirconium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.00	0.00
% Exceedance*							0%	0%					0%	0%

Footnotes:

RPD = Relative Percent Difference; MDL: Method Detection Limit

All value "<DL" have been replaced by "DL".

* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.

Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.

Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.

Italic values correspond to a RPD higher than 20% and for which one of the result is within 10X the MDL and the other one exceeds 10x the MDL.

MEL-17	CCME	Sample date	Annual Average								5/29/2022	6/19/2022	7/17/2022	8/9/2022	9/11/2022	10/2/2022
Parameter	Guideline	Unit	2015	2016	2017	2018	2019	2020	2021	2022	C2F1292	C2H5752	C2K5880	C2N1380	C2Q7464	C2T0442
Field Measured																
Temperature		°C	11.00	10.27	12.20	16.20	12.28	14.67	8.98	8.7	3.4	11	14	13.4	6.6	4
pH	6.5 to 9.0	pH units	8.21	9.30	8.44	8.57	7.91	7.91	8.99	7.11	6.49	7.00	6.85	7.33	7.1	7.19
Conductivity		uS/cm	0.34	2.61	0.74	0.47	256.35	293.87	249.70	429.3	116.9	169.7	227.1	260.1	373.2	1429
Dissolved oxygen		mg/L	-	-	-	-	10.13	39.80	27.17	10.78	11.8	10.62	9.13	-	11.55	-
Dissolved oxygen		%	-	-	-	-	94.18	99.73	85.61	105.4	88.6	98.5	89.8	89.8	94.3	172.6
Conventional Parameters																
pH	6.5 to 9.0	pH units	7.69	7.48	7.73	7.50	7.77	7.90	7.78	7.63	7.07	7.29	7.83	7.92	7.78	7.88
Turbidity		NTU	1.48	3.92	0.58	0.53	0.65	0.93	0.63	0.8	0.6	0.7	1.1	0.8	0.7	0.8
Specific conductivity		umhos/cm	313.00	2151.00	657.50	302.33	257.50	316.67	236.67	297	110	170	210	260	320	710
Hardness, as CaCO3		mg/L	133.60	804.00	148.13	78.10	93.35	112.70	86.43	110.1	40.3	63	79.8	98.2	113	266
Total alkalinity, as CaCO3		mg/L	44.40	44.00	44.25	41.00	43.00	59.33	50.00	51	26	38	57	69	58	57
Carbonate, as CaCO3		mg/L	0.60	1.67	1.00	1.00	1.00	1.00	0.50	0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bicarbonate, as CaCO3		mg/L	54.18	44.00	44.00	41.00	42.50	59.00	49.67	51	26	38	57	69	57	56
TDS		mg/L	187.00	2241.00	590.50	156.67	231.25	221.67	205.83	205.83	75	95	130	200	230	505
TDS, calculated		mg/L	-	-	-	-	-	-	140.00	160	60	82	110	130	170	410
TSS		mg/L	5.25	2.33	3.75	1.67	1.50	4.00	4.83	2	1	2	3	2	2	<1
Total organic carbon		mg/L	-	11.20	9.95	7.50	8.50	9.90	8.30	8.7	5.1	7.4	9	9.8	10	11
Dissolved organic carbon		mg/L	-	8.90	9.57	7.03	8.25	9.70	8.42	8.1	4.4	6.5	8.4	9.2	10	10
Major Ions																
Chloride	120	mg/L	-	1700.00	152.50	57.03	43.75	44.67	30.00	36	13	21	26	33	34	89
Cyanide		mg/L	-	0.0050	0.0050	0.0050	0.0050	0.0050	0.0025	0.00929	0.00091	0.00102	0.00528	0.00052	<0.00050	<0.00050
Cyanide (free)	0.005	mg/L	-	0.0050	0.0013	0.0034	0.0034	0.0013	0.0025	0.0026	0.0037	0.0025	0.0027	0.0025	<0.0020	<0.0033
Cyanide (WAD)		mg/L	-	-	-	-	0.0010	0.0010	0.0007	0.01054	0.0011	0.0014	0.06	<0.00050	<0.00050	<0.00050
Silica		mg/L	-	5.47	1.56	1.20	1.36	2.20	1.74	2.53	0.51	0.74	2.1	2.7	3.6	5.5
Sulfate	128	mg/L	-	77.00	15.50	7.57	7.48	16.17	17.75	38.4	9.1	8.2	7	6.8	39	160
Nutrients and Chlorophyll a																
Ammonia Nitrogen (as N)		mg/L	-	8.76	0.08	0.05	0.05	0.30	0.03	0.085	<0.050	0.073	<0.050	<0.050	0.21	0.15
Nitrate (as N)	13	mg/L	0.64	8.22	0.15	0.14	0.10	0.13	0.05	0.10	<0.10	<0.10	<0.10	<0.10	0.19	0.23
Nitrite (as N)	0.06	mg/L	0.01	0.14	0.01	0.01	0.01	0.01	0.01	0.005	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Total Kjeldahl nitrogen		mg/L	0.54	9.75	0.51	0.42	0.41	0.60	0.39	0.42	0.35	0.34	0.37	0.42	0.51	0.53
Total phosphorus		mg/L	0.05	0.01	0.01	0.02	0.02	0.02	0.01	0.016	0.009	<0.020	<0.020	<0.020	0.032	0.024
Orthophosphate (P)		mg/L	-	0.17	0.01	0.01	0.01	0.01	0.01	0.005	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Total Metals																
Aluminum		mg/L	0.01045	0.00587	0.00510	0.00590	0.00708	0.01017	0.01065	0.0070	0.0085	0.0056	0.0054	0.0057	0.0069	0.0096
Antimony		mg/L	0.00020	0.00050	0.00050	0.00050	0.00050	0.00025	0.00025	0.00025	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Arsenic	0.005	mg/L	0.00077	0.00070	0.00073	0.00048	0.00064	0.00108	0.00109	0.00114	0.0015	0.00102	0.00103	0.00115	0.00094	0.00119
Barium		mg/L	0.03840	0.25100	0.05645	0.02650	0.02873	0.03383	0.02935	0.0280	0.0151	0.0217	0.0279	0.0273	0.0296	0.0462
Beryllium		mg/L	0.00020	0.00037	0.00010	0.00010	0.00010	0.00010	0.00005	0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron		mg/L	0.01000	0.04200	0.05000	0.05000	0.05000	0.05000	0.02500	0.025	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Cadmium	0.00006	mg/L	0.00001	0.00003	0.00001	0.00001	0.00001	0.00001	0.00001	0.00008	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000024
Chromium		mg/L	0.00011	0.00077	0.00100	0.00100	0.00100	0.00100	0.00050	0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Copper	0.002	mg/L	0.00098	0.00097	0.00096	0.00071	0.00099	0.00120	0.00134	0.00112	0.00076	0.00099	0.00105	0.00103	0.00128	0.00162
Iron	0.3	mg/L	0.29750	0.70000	0.17350	0.15100	0.25625	0.31500	0.49800	0.236	0.17	0.203	0.345	0.217	0.146	0.333
Lead	0.001	mg/L	0.00009	0.00027	0.00020	0.00020	0.00020	0.00020	0.00010	0.00010	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Lithium		mg/L	0.01333	0.27267	0.04680	0.01240	0.00910	0.00783	0.00438	0.0045	<0.0020	0.0027	0.0034	0.0041	0.0043	0.0112
Manganese		mg/L	0.06418	0.13217	0.02493	0.05110	0.04853	0.05880	0.12482	0.0451	0.0607	0.0717	0.036	0.0203	0.0203	0.0529
Mercury	0.000026	mg/L	0.00002	0.00007	0.00001	0.00001	0.00001	0.00001	0.00001	0.000005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.073	mg/L	0.00022	0.00067	0.00100	0.00100	0.00100	0.00100	0.00050	0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Nickel	0.025	mg/L	0.00158	0.00417	0.00140	0.00130	0.00150	0.00203	0.00202	0.0021	0.0012	0.0013	0.0015	0.0015	0.0017	0.0052
Selenium	0.001	mg/L	0.00010	0.00170	0.00010	0.00010	0.00010	0.00010	0.00005	0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Silver	0.0025	mg/L	0.00001	0.00006	0.00002	0.00002	0.00002	0.00002	0.00001	0.000010	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Strontium		mg/L	0.33450	4.33233	0.89825	0.29300	0.27900	0.31967	0.20933	0.240	0.0841	0.139	0.183	0.232	0.259	0.555
Thallium	0.0008	mg/L	0.00010	0.00030	0.00008	0.00001	0.00001	0.00001	0.00001	0.000005	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin		mg/L	0.00020	0.00233	0.00500	0.00500	0.00500	0.00500	0.00250	0.0025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Titanium		mg/L	0.00050	0.02500	0.00500	0.00500	0.00500	0.00500	0.00250	0.0025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Uranium	0.015	mg/L	0.00011	0.00077	0.00013	0.00010	0.00011	0.00010	0.00008	0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00032
Vanadium		mg/L	0.00020	0.00327	0.00500	0.00500	0.00500	0.00500	0.00250	0.0025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Zinc	0.03	mg/L	0.00165	0.00233	0.00500	0.00500	0.00500	0.00500	0.00250	0.0025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Dissolved Metals																
Aluminum		mg/L	-	0.00595	0.00443	0.00420	0.00373	0.00337	0.01050	0.0043	0.0045	0.0039	0.0037	0.0032	0.0045	0.0061
Antimony		mg/L	-	0.00030	0.00050	0.00050	0.00050	0.00025	0.00025	0.00025	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Arsenic	0.005	mg/L	-	0.00058	0.00070	0.00046	0.00063	0.00098	0.00092	0.00104	0.0014	0.00093	0.00096	0.00109	0.00102	0.00083
Barium		mg/L	-	0.35855	0.05430	0.02650	0.03017	0.03377	0.02692	0.0276	0.014	0.0189	0.0284	0.0278	0.0315	0.0452
Beryllium		mg/L	-	0.00030	0.00010	0.00010	0.00010	0.00010	0.00005	0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron		mg/L	-	-	-	0.05000	0.05000	0.05000	0.02500	0.025	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Cadmium	0.00006	mg/L	-	0.00003	0.00001	0.00001	0.00001	0.00001	0.00001	0.000005	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Calcium (Dissolved)		mg/L	39.37													

MEL-17 Parameter	CCME Guideline	Sample date Unit	Annual Average								5/29/2022	6/19/2022	7/17/2022	8/9/2022	9/11/2022	10/2/2022
			2015	2016	2017	2018	2019	2020	2021	2022	C2F1292	C2H5752	C2K5880	C2N1380	C2Q7464	C2T0442
Mercury	0.000026	mg/L	-	0.00006	0.00001	0.00001	0.00001	0.00001	0.00001	0.00057	0.000005	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	0.073	mg/L	-	0.00075	0.00100	0.00100	0.00100	0.00100	0.00100	0.00050	0.0005	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Nickel	0.025	mg/L	-	0.00470	0.00130	0.00130	0.00167	0.00197	0.00173	0.0019	0.0013	0.0011	0.0015	0.0014	0.0014	0.0049
Potassium (Dissolved)		mg/L	2.08	38.00	4.52	1.93	1.85	2.67	1.87	2.17	1.31	1.54	1.89	2.39	2.35	3.52
Selenium	0.001	mg/L	-	0.00055	0.00010	0.00010	0.00010	0.00010	0.00010	0.00005	0.00005	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Silver	0.0025	mg/L	-	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00001	0.000010	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020
Sodium (Dissolved)		mg/L	5.38	192.00	24.80	10.80	8.68	11.30	8.75	11.07	5.09	6.27	7.7	9.97	11.4	26
Strontium		mg/L	-	5.80750	0.89425	0.27900	0.30967	0.32400	0.20933	0.2522	0.0911	0.138	0.194	0.258	0.278	0.554
Thallium	0.0008	mg/L	-	0.00045	0.00006	0.00001	0.00001	0.00001	0.00001	0.00001	0.000005	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Tin		mg/L	-	0.00300	0.00500	0.00500	0.00500	0.00500	0.00500	0.00250	0.0025	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Titanium		mg/L	-	0.01250	0.00500	0.00500	0.00500	0.00500	0.00500	0.00250	0.0025	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Uranium	0.015	mg/L	-	0.00064	0.00012	0.00010	0.00010	0.00010	0.00010	0.00006	0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	0.00032
Vanadium		mg/L	-	0.00285	0.00500	0.00500	0.00500	0.00500	0.00500	0.00250	0.0025	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Zinc	0.03	mg/L	-	0.00300	0.00500	0.00500	0.00500	0.00500	0.00500	0.00367	0.0025	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050

QAQC MEL-17	Sample Date		9/11/2022					
Parameter	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters								
pH	pH units		5.75	-	7.74	7.78	0.52	-
Turbidity	NTU	0.1	0.1	0.1	0.7	0.7	0.00	0.00
Specific conductivity	umhos/cm	1	1	1	320	320	0.00	0.00
Hardness, as CaCO3	mg/L	0.5	0.5	-	116	113	2.62	-
Hardness, as CaCO3 (dissolved)	mg/L	0.5	0.5	-	117	118	0.85	-
Total alkalinity, as CaCO3	mg/L	1	1	1	58	58	0.00	0.00
Carbonate, as CaCO3	mg/L	1	1	-	1	1	0.00	-
Bicarbonate, as CaCO3	mg/L	1	1	-	58	57	1.74	-
TDS	mg/L	10	10	10	195	230	16.47	0.00
TDS, calculated	mg/L	1	1	-	170	170	0.00	-
TSS	mg/L	1	1	1	3	2	40.00	0.00
Total organic carbon	mg/L	0.4	0.4	0.4	10	10	0.00	0.00
Dissolved organic carbon	mg/L	0.4	0.4	0.4	10	10	0.00	0.00
Major Ions								
Chloride	mg/L	1	1	1	34	34	0.00	0.00
Cyanide	mg/L	0.0005	0.0005	0.0005	0.00081	0.0005	47.33	0.00
Cyanide (free)	mg/L	0.002	0.002	0.002	0.002	0.002	0.00	0.00
Cyanide (WAD)	mg/L	0.0005	0.0005	0.0005	0.00094	0.0005	61.11	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00
Silica	mg/L	0.05	0.05	0.05	3.2	3.6	11.76	0.00
Sulfate	mg/L	0.5	0.5	0.5	39	39	0.00	0.00
Nutrients and Chlorophyll a								
Ammonia Nitrogen (as N)	mg/L	0.05	0.05	0.05	0.05	0.21	123.08	0.00
Nitrate (as N)	mg/L	0.1	0.1	0.1	0.16	0.19	17.14	0.00
Nitrite (as N)	mg/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Nitrate + nitrite (as N)	mg/L	0.1	0.1	-	0.16	0.19	17.14	-
Total Kjeldahl nitrogen	mg/L	0.1	0.1	0.1	0.26	0.51	64.94	0.00
Total phosphorus	mg/L	0.02	0.02	0.02	0.02	0.032	46.15	0.00
Orthophosphate (P)	mg/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00
General Organics								
Total oil and grease	mg/L	0.5	0.5	0.5	0.8	0.8	0.00	0.00
Total Metals								
Aluminum	mg/L	0.003	0.003	0.003	0.0058	0.0069	17.32	0.00
Antimony	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.00096	0.00094	2.11	0.00
Barium	mg/L	0.001	0.001	0.001	0.0308	0.0296	3.97	0.00
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Bismuth	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Boron	mg/L	0.05	0.05	0.05	0.05	0.05	0.00	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Calcium (total)	mg/L	0.05	0.05	-	39.1	37.6	3.91	-

QAQC MEL-17	Sample Date		9/11/2022					
Parameter	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Cobalt	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Copper	mg/L	0.0002	0.0002	0.0002	0.00131	0.00133	1.52	0.00
Iron	mg/L	0.005	0.005	0.005	0.119	0.106	11.56	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Lithium	mg/L	0.002	0.002	0.002	0.0044	0.0045	2.25	0.00
Magnesium (Dissolved)	mg/L	0.05	0.05	-	4.53	4.67	3.04	-
Manganese	mg/L	0.001	0.001	0.001	0.0236	0.0243	2.92	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Nickel	mg/L	0.001	0.001	0.001	0.0013	0.0014	7.41	0.00
Potassium (Dissolved)	mg/L	0.05	0.05	-	2.27	2.35	3.46	-
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Silicon	mg/L	0.1	0.1	0.1	1.64	1.63	0.61	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Sodium (Dissolved)	mg/L	0.05	0.05	-	11	11.4	3.57	-
Strontium	mg/L	0.001	0.001	0.001	0.267	0.278	4.04	0.00
Sulphur	mg/L	3	3	-	11.7	12.7	8.20	-
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Tin	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Titanium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Vanadium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Zirconium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Volatile Organics								
Benzene	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Ethylbenzene	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Toluene	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Xylenes	mg/L	0.0004	0.0004	0.0004	0.0004	0.0004	0.00	0.00
m,p-Xylenes	mg/L	0.0004	0.0004	0.0004	0.0004	0.0004	0.00	0.00
o-Xylene	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
F1 (C6-C10)-BTEX	mg/L	0.025	0.025	0.025	0.025	0.025	0.00	0.00
F1 (C6-C10)	mg/L	0.025	0.025	0.025	0.025	0.025	0.00	0.00
% Exceedance*							0%	0%

Footnotes:

RPD = Relative Percent Difference; MDL: Method Detection Limit

All value "<DL" have been replaced by "DL".

* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.

Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.

Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.

Italic values correspond to a RPD higher than 20% and for which one of the result is within 10X the MDL and the other one exceeds 10x the MDL.

MEL-18 Parameter	CCME Guideline	Unit	Annual Average							5/29/2022	6/19/2022	7/17/2022	8/8/2022	9/11/2022	10/2/2022
			2016	2017	2018	2019	2020	2021	2022	C2F1292	C2H5576	C2K5968	C2N1406	C2Q7546	C2T0434
Field Measured															
Temperature		°C	7.95	-	17.10	9.22	14.40	8.15	9.8	1.1	8.5	15.4	18.6	6.8	8.3
pH	6.5 to 9.0	pH units	8.58	-	8.45	7.78	7.84	7.81	7.54	6.98	7.6	7.03	8.29	7.3	8.01
Conductivity		uS/cm	145.85	-	105.40	127.83	142.20	416.50	204.9	47.2	158.4	184.4	175.9	244	419.2
Dissolved oxygen		mg/L	-	-	-	10.73	40.17	29.86	10.27	10.21	10.45	9.06	-	11.34	-
Dissolved oxygen		%	-	-	-	92.73	75.18	85.44	86.9	72	90	90.6	80.7	92.9	95
Conventional Parameters															
pH	6.5 to 9.0	pH units	7.66	7.70	7.35	7.61	7.54	7.60	7.57	6.81	7.19	7.89	7.86	7.79	7.85
Turbidity		NTU	1.05	0.40	0.55	0.50	0.53	0.39	0.5	0.8	0.3	0.4	0.5	0.4	0.5
Specific conductivity		umhos/cm	155.00	143.33	125.00	123.75	156.67	156.67	162	44	150	180	190	200	210
Hardness, as CaCO3		mg/L	59.05	53.97	-	45.78	57.17	64.87	61.3	14	16.8	57.3	70.8	73.3	76
Total alkalinity, as CaCO3		mg/L	37.50	35.00	28.50	28.75	30.67	34.67	38	14	34	44	45	48	45
Carbonate, as CaCO3		mg/L	19.20	17.97	-	15.27	1.00	0.50	0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bicarbonate, as CaCO3		mg/L	37.50	34.67	28.50	28.50	30.67	34.50	38	14	34	44	45	48	45
TDS		mg/L	153.00	114.67	60.00	93.75	110.00	122.50	134	80	100	115	140	260	110
TDS, calculated		mg/L	-	-	-	-	-	88.67	80	20	74	88	95	100	100
TSS		mg/L	1.50	4.33	2.00	1.25	3.33	2.08	1	1	2	<1	1	1	2
Total organic carbon		mg/L	4.10	4.27	3.80	4.13	3.97	4.05	4.2	2.5	3.4	4.4	4.8	4.8	5
Dissolved organic carbon		mg/L	4.10	3.97	3.55	3.85	3.70	4.03	4.0	1.8	3.3	4.7	4.7	4.9	4.8
Major Ions															
Chloride	120	mg/L	21.50	19.33	17.00	17.00	23.33	21.17	21.3	3.7	21	24	25	26	28
Cyanide		mg/L	0.0050	0.0050	0.0050	0.0050	0.0050	0.0025	0.00073	0.00102	0.00171	<0.00050	0.00092	<0.00050	<0.00050
Cyanide (free)	0.005	mg/L	-	-	-	0.0010	0.0011	0.0017	0.0022	0.0034	<0.0020	<0.0020	<0.0020	0.0044	0.0026
Cyanide (WAD)		mg/L	0.0010	0.0010	0.0010	0.0010	0.0010	0.0008	0.00062	0.001	0.00067	<0.00050	<0.00050	0.0013	<0.00050
Silica		mg/L	0.82	0.55	0.21	0.70	0.74	0.45	0.524	0.069	<0.050	0.55	0.9	0.88	0.72
Sulfate	128	mg/L	3.50	4.10	3.95	4.30	5.80	7.48	7.19	<0.50	6.6	6.8	7.7	9.8	12
Nutrients and Chlorophyll a															
Ammonia Nitrogen (as N)		mg/L	0.05	0.01	0.05	0.08	0.06	0.03	0.034	<0.050	<0.050	<0.050	<0.050	<0.050	0.077
Nitrate (as N)	13	mg/L	0.01	0.01	0.10	0.10	0.10	0.05	0.05	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrite (as N)	0.06	mg/L	0.10	0.10	0.01	0.01	0.01	0.01	0.005	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Total Kjeldahl nitrogen		mg/L	0.31	0.23	0.22	0.32	0.25	0.21	0.22	0.17	0.18	0.3	0.23	0.27	0.18
Total phosphorus		mg/L	0.01	0.01	0.02	0.02	0.02	0.01	0.016	0.005	<0.020	<0.020	<0.020	<0.020	0.052
Orthophosphate (P)		mg/L	0.01	0.01	0.01	0.01	0.01	0.01	0.005	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Total Metals															
Aluminum		mg/L	0.00605	0.00457	-	0.00858	0.01003	0.01070	0.0082	0.0068	0.0064	0.0053	0.0117	0.0071	0.012
Antimony		mg/L	0.00050	0.00050	-	0.00050	0.00050	0.00025	0.00025	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Arsenic	0.005	mg/L	0.00165	0.00145	-	0.00170	0.00274	0.00209	0.00269	0.00246	0.00208	0.00287	0.00398	0.00235	0.00238
Barium		mg/L	0.01615	0.01490	-	0.01475	0.02020	0.01895	0.0156	0.008	0.0182	0.0192	0.016	0.0161	0.0163
Beryllium		mg/L	0.00010	0.00010	-	0.00010	0.00010	0.00005	0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron		mg/L	0.05000	0.05000	-	0.05000	0.05000	0.02500	0.025	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Cadmium	0.00006	mg/L	0.00001	0.00001	-	0.00001	0.00001	0.00001	0.00005	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Chromium		mg/L	0.00100	0.00100	-	0.00100	0.00100	0.00050	0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Copper	0.002	mg/L	0.00061	0.00060	-	0.00067	0.00084	0.00098	0.00087	0.00081	0.00075	0.00088	0.00108	0.00081	0.00088
Iron	0.3	mg/L	0.07400	0.08000	-	0.14525	0.24600	0.12883	0.150	0.3	0.223	0.111	0.094	0.058	0.111
Lead	0.001	mg/L	0.00020	0.00020	-	0.00020	0.00020	0.00014	0.00010	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Lithium		mg/L	0.00520	0.00337	-	0.00553	0.01440	0.00862	0.0078	0.0022	0.0076	0.0097	0.0098	0.009	0.0087
Manganese		mg/L	0.00950	0.01273	-	0.01738	0.06147	0.01595	0.0140	0.0469	0.0081	0.0074	0.0093	0.0048	0.0072
Mercury	0.000026	mg/L	0.00002	0.00001	0.00001	0.00001	0.00001	0.00001	0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.073	mg/L	0.00100	0.00100	-	0.00100	0.00100	0.00050	0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Nickel	0.025	mg/L	0.00100	0.00100	-	0.00103	0.00110	0.00075	0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Selenium	0.001	mg/L	0.00010	0.00010	-	0.00010	0.00010	0.00005	0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Silver	0.0025	mg/L	0.00002	0.00002	-	0.00002	0.00002	0.00001	0.000010	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Strontium		mg/L	0.13200	0.10300	-	0.10288	0.14933	0.17083	0.1439	0.0416	0.135	0.174	0.179	0.171	0.163
Thallium	0.0008	mg/L	0.00005	0.00004	-	0.00001	0.00001	0.00001	0.00005	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin		mg/L	0.00500	0.00500	-	0.00500	0.00500	0.00250	0.0025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Titanium		mg/L	0.00500	0.00500	-	0.00500	0.00500	0.00250	0.0025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Uranium	0.015	mg/L	0.00010	0.00010	-	0.00010	0.00010	0.00005	0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Vanadium		mg/L	0.00500	0.00500	-	0.00500	0.00500	0.00250	0.0025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Zinc	0.03	mg/L	0.00500	0.00500	-	0.00500	0.00500	0.00250	0.0025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Dissolved Metals															
Aluminum		mg/L	0.00455	0.00357	-	0.00320	0.00597	0.00597	0.0032	<0.0030	0.0067	<0.0030	0.0035	0.0045	<0.0030
Antimony		mg/L	0.00050	0.00050	-	0.00050	0.00050	0.00025	0.00025	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Arsenic	0.005	mg/L	0.00133	0.00124	-	0.00135	0.00197	0.00175	0.00207	0.00193	0.00177	0.00222	0.00327	0.00195	0.00125
Barium		mg/L	0.01440	0.01487	-	0.01480	0.01987	0.01615	0.0148	0.0081	0.017	0.0166	0.0159	0.0159	0.0155
Beryllium		mg/L	0.00010	0.00010	-	0.00010	0.00010	0.00005	0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron		mg/L	0.05000	0.05000	-	0.05000	0.05000	0.02500	0.025	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Cadmium	0.00006	mg/L	0.00001	0.00001	-	0.00001	0.00001	0.00001	0.00005	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Calcium (Dissolved)		mg/L	-	-	-	-	-	18.73	19.7	5.7	18.2	21.6	23.7	24.6	24.4
Chromium		mg/L	0.00100	0.00100	-	0.00100	0.00100	0.00050	0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Copper	0.002	mg/L	0.00062	0.00058	-	0.00056	0.00067	0.00078	0.00085	0.00069	0.00119	0.00086	0.00083	0.00083	0.00068
Iron	0.3	mg/L	0.02860	0.04233	-	0.08183	0.14150	0.05253	0.0637	0.198	0.0725	0.0403	0.0347	0.017	0.0198

QAQC MEL-18 Parameter	Sample Date		8/8/2022						10/2/2022					
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters														
pH	pH units		5.77	-	7.84	7.86	0.25	-	5.64	-	7.78	7.85	0.90	-
Turbidity	NTU	0.1	0.1	0.1	0.5	0.5	0.00	0.00	0.1	0.1	0.8	0.5	46.15	0.00
Specific conductivity	umhos/cm	1	1.1	1	190	190	0.00	9.52	1.3	1	210	210	0.00	26.09
Hardness, as CaCO3	mg/L	0.5	0.5	-	74.7	73.3	1.89	-	0.5	-	75.7	76	0.40	-
Hardness, as CaCO3 (dissolved)	mg/L	0.5	0.5	-	72.5	71.3	1.67	-	0.5	-	74.5	74.4	0.13	-
Total alkalinity, as CaCO3	mg/L	1	1	1	45	45	0.00	0.00	1	1	46	45	2.20	0.00
Carbonate, as CaCO3	mg/L	1	1	-	1	1	0.00	-	1	-	1	1	0.00	-
Bicarbonate, as CaCO3	mg/L	1	1	-	45	45	0.00	-	1	-	46	45	2.20	-
TDS	mg/L	10	10	10	135	140	3.64	10.00	10	10	95	110	14.63	0.00
TDS, calculated	mg/L	1	1	-	95	95	0.00	-	1	-	100	100	0.00	-
TSS	mg/L	1	1	1	2	1	66.67	0.00	1	1	2	2	0.00	0.00
Total organic carbon	mg/L	0.4	0.4	0.4	4.8	4.8	0.00	0.00	0.4	0.4	4.9	5	2.02	0.00
Dissolved organic carbon	mg/L	0.4	0.4	0.4	4.8	4.7	2.11	0.00	0.4	0.4	4.8	4.8	0.00	0.00
Major Ions														
Chloride	mg/L	0.5/1*	1	1	25	25	0.00	0.00	0.5	0.5	28	28	0.00	0.00
Cyanide	mg/L	0.0005	0.0005	0.0005	0.0005	0.00092	59.15	0.00	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Cyanide (free)	mg/L	0.002	0.002	0.002	0.002	0.002	0.00	0.00	0.002	0.002	0.003	0.0026	14.29	0.00
Cyanide (WAD)	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00	0.1	0.1	0.1	0.1	0.00	0.00
Silica	mg/L	0.05	0.05	0.05	0.94	0.9	4.35	0.00	0.25	0.05	0.71	0.72	1.40	133.33
Sulfate	mg/L	0.5	0.5	0.5	7.6	7.7	1.31	0.00	0.5	0.5	12	12	0.00	0.00
Nutrients and Chlorophyll a														
Ammonia Nitrogen (as N)	mg/L	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.05	0.05	0.05	0.077	42.52	0.00
Nitrate (as N)	mg/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00	0.1	0.1	0.1	0.1	0.00	0.00
Nitrite (as N)	mg/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.00
Nitrate + nitrite (as N)	mg/L	0.1	0.1	-	0.1	0.1	0.00	-	0.1	-	0.1	0.1	0.00	-
Total Kjeldahl nitrogen	mg/L	0.1	0.1	0.1	0.28	0.23	19.61	0.00	0.1	0.1	0.18	0.18	0.00	0.00
Total phosphorus	mg/L	0.02	0.02	0.02	0.02	0.02	0.00	0.00	0.054	0.02	0.076	0.052	37.50	91.89
Orthophosphate (P)	mg/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.023	0.01	78.79	0.00
Total Metals														
Aluminum	mg/L	0.003	0.003	0.003	0.0141	0.0117	18.60	0.00	0.003	0.003	0.0115	0.012	4.26	0.00
Antimony	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.00379	0.00398	4.89	0.00	0.0001	0.0001	0.00243	0.00238	2.08	0.00
Barium	mg/L	0.001	0.001	0.001	0.0163	0.016	1.86	0.00	0.001	0.001	0.0162	0.0163	0.62	0.00
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Bismuth	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.00	0.00
Boron	mg/L	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.05	0.05	0.05	0.05	0.00	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.000011	0.00001	9.52	0.00	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Calcium (total)	mg/L	0.05	0.05	-	24.7	24.2	2.04	-	0.05	-	24.8	24.8	0.00	-
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.00	0.00
Cobalt	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.0018	0.00108	50.00	0.00	0.0005	0.0005	0.00097	0.00088	9.73	0.00
Iron	mg/L	0.01	0.01	0.01	0.092	0.094	2.15	0.00	0.01	0.01	0.11	0.111	0.90	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Lithium	mg/L	0.002	0.002	0.002	0.0099	0.0098	1.02	0.00	0.002	0.002	0.0088	0.0087	1.14	0.00
Magnesium (total)	mg/L	0.05	0.05	-	3.16	3.12	1.27	-	0.05	-	3.38	3.41	0.88	-
Manganese	mg/L	0.001	0.001	0.001	0.0091	0.0093	2.17	0.00	0.001	0.001	0.0074	0.0072	2.74	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.00	0.00
Nickel	mg/L	0.001	0.001	0.001	0.0012	0.001	18.18	0.00	0.001	0.001	0.001	0.001	0.00	0.00
Potassium (total)	mg/L	0.05	0.05	-	1.52	1.52	0.00	-	0.05	-	1.38	1.36	1.46	-
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Silicon	mg/L	0.1	0.1	0.1	0.52	0.52	0.00	0.00	0.1	0.1	0.36	0.37	2.74	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Sodium (total)	mg/L	0.05	0.05	-	6.59	6.66	1.06	-	0.05	-	6.88	6.65	3.40	-
Strontium	mg/L	0.001	0.001	0.001	0.0179	0.0179	0.00	0.00	0.001	0.001	0.0164	0.0163	0.61	0.00
Sulphur	mg/L	3	3	-	3	3	0.00	-	3	-	3.9	4.6	16.47	-
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Tin	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Titanium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Vanadium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00

QAQC MEL-18 Parameter	Sample Date		8/8/2022						10/2/2022					
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Zinc	mg/L	0.005	0.005	0.005	0.0128	0.005	87.64	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Zirconium	mg/L	0.0001	0.0001	0.0001	0.0001	0.00014	33.33	0.00	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Dissolved Metals														
Aluminum	mg/L	0.003	0.003	0.003	0.0037	0.0035	5.56	0.00	0.003	0.003	0.003	0.003	0.00	0.00
Antimony	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.00323	0.00327	1.23	0.00	0.0001	0.0001	0.00155	0.00125	21.43	0.00
Barium	mg/L	0.001	0.001	0.001	0.0161	0.0159	1.25	0.00	0.001	0.001	0.0163	0.0155	5.03	0.00
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Bismuth	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.00	0.00
Boron	mg/L	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.05	0.05	0.05	0.05	0.00	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Calcium (Dissolved)	mg/L	0.05	0.05	-	24.1	23.7	1.67	-	0.05	-	24.7	24.4	1.22	-
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.00	0.00
Cobalt	mg/L	0.0002	0.00025	0.0002	0.0002	0.0002	0.00	22.22	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Copper	mg/L	0.0002	0.0002	0.0002	0.00087	0.00083	4.71	0.00	0.0002	0.0002	0.00081	0.00068	17.45	0.00
Iron	mg/L	0.005	0.005	0.005	0.0357	0.0347	2.84	0.00	0.005	0.005	0.0191	0.0198	3.60	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Lithium	mg/L	0.002	0.002	0.002	0.0085	0.0083	2.38	0.00	0.002	0.002	0.0093	0.0087	6.67	0.00
Magnesium (Dissolved)	mg/L	0.05	0.05	-	2.98	2.96	0.67	-	0.05	-	3.09	3.29	6.27	-
Manganese	mg/L	0.001	0.001	0.001	0.0038	0.0036	5.41	0.00	0.001	0.001	0.0022	0.002	9.52	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.00	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.00	0.00
Potassium (Dissolved)	mg/L	0.05	0.05	-	1.28	1.26	1.57	-	0.05	-	1.35	1.36	0.74	-
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Silicon	mg/L	0.1	0.1	0.1	0.43	0.42	2.35	0.00	0.1	0.1	0.34	0.31	9.23	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Sodium (Dissolved)	mg/L	0.05	0.05	-	6.31	6.35	0.63	-	0.05	-	6.55	6.75	3.01	-
Strontium	mg/L	0.001	0.001	0.001	0.194	0.19	2.08	0.00	0.001	0.001	0.174	0.163	6.53	0.00
Sulphur	mg/L	3	3	-	3	3	0.00	-	3	-	3.2	3.7	14.49	-
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Tin	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Titanium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Vanadium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Zirconium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.00	0.00
% Exceedance*							0%	0%				1%	0%	

Footnotes:

RPD = Relative Percent Difference; MDL: Method Detection Limit

All value "<DL" have been replaced by "DL".

* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.

Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.

Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.

Italic values correspond to a RPD higher than 20% and for which one of the result is within 10X the MDL and the other one exceeds 10x the MDL.

MEL-19	Unit	Annual Average	6/19/2022	7/17/2022	8/8/2022	9/11/2022	10/2/2022
Parameter			C2H5655	C2K5955	C2N1413	C2Q7653	C2T0630
Field Measured							
Temperature	°C	10.8	11.3	14.7	18.2	7	2.8
pH	pH units	7.88	8.1	7.76	7.9	7.82	7.81
Conductivity	uS/cm	4,061	1075	1454	2265	3986	11525
Dissolved oxygen	mg/L	9.90	9.21	-	-	8.3	12.18
Dissolved oxygen	%	86.7	84.4	79.4	104.1	71.4	94
Conventional Parameters							
pH	pH units	7.98	7.93	8.1	8.07	7.84	7.94
Turbidity	NTU	14.8	43	26	1.2	3.6	0.4
Hardness, as CaCO3	mg/L	594	206	311	532	800	1120
Total alkalinity, as CaCO3	mg/L	111	97	110	120	110	120
TDS	mg/L	1,710	590	800	1480	2310	3370
TDS, calculated	mg/L	1,588	550	790	1400	2200	3000
TSS	mg/L	11	15	20	2	16	4
Major Ions							
Chloride	mg/L	618	170	240	460	920	1300
Cyanide	mg/L	0.00426	0.00559	0.00605	0.00187	0.0045	0.00328
Fluoride	mg/L	0.19	0.14	0.18	0.22	0.21	0.18
Silica	mg/L	5.1	4.1	4.7	5.6	5.7	5.5
Sulfate	mg/L	328	120	200	360	430	530
Nutrients and Chlorophyll a							
Ammonia Nitrogen (as N)	mg/L	2.8	2.2	2.8	3.7	2.6	2.7
Nitrate (as N)	mg/L	5.62	3.42	4.97	8.41	5.29	6
Nitrite (as N)	mg/L	0.236	0.134	0.251	0.339	0.257	0.198
Total phosphorus	mg/L	0.030	0.05	0.027	< 0.020	0.039	0.024
Orthophosphate (P)	mg/L	0.008	< 0.010	< 0.010	0.013	0.01	< 0.010
Total Metals							
Aluminum	mg/L	0.4209	1.11	0.519	0.0553	0.375	0.0451
Arsenic	mg/L	0.0228	0.0198	0.0231	0.03	0.0203	0.0206
Barium	mg/L	0.0782	0.0401	0.0454	0.0624	0.109	0.134
Cadmium	mg/L	0.000053	0.000016	0.000022	0.000072	0.000053	0.0001
Chromium	mg/L	0.0014	0.003	0.0015	< 0.0010	< 0.0020	< 0.0020
Copper	mg/L	0.00776	0.0117	0.00777	0.00543	0.0073	0.0066
Iron	mg/L	0.656	1.74	0.861	0.054	0.566	0.059
Lead	mg/L	0.00080	0.00162	0.00115	0.00034	0.0007	< 0.00040
Manganese	mg/L	0.1158	0.0513	0.0539	0.0287	0.227	0.218
Mercury	mg/L	0.000005	< 0.00001	< 0.00001	< 0.00001	< 0.00001	-

MEL-19	Unit	Annual Average	6/19/2022	7/17/2022	8/8/2022	9/11/2022	10/2/2022
Parameter			C2H5655	C2K5955	C2N1413	C2Q7653	C2T0630
Molybdenum	mg/L	0.0050	0.0047	0.0056	0.0068	0.0042	0.0038
Nickel	mg/L	0.0370	0.021	0.0242	0.0302	0.0446	0.0652
Selenium	mg/L	0.00082	0.00053	0.00069	0.00089	0.00101	0.00099
Silver	mg/L	0.000014	< 0.000020	< 0.000020	< 0.000020	< 0.000040	< 0.000040
Thallium	mg/L	0.000032	0.000039	0.000031	0.000034	0.000028	0.000028
Zinc	mg/L	0.0035	< 0.0050	< 0.0050	< 0.0050	< 0.010	< 0.010
Dissolved Metals							
Calcium (Dissolved)	mg/L	156.3	54.1	82.3	142	214	289
Magnesium (Dissolved)	mg/L	48.2	14.1	22.1	42.6	66.7	95.4
Potassium (Dissolved)	mg/L	24.4	15.2	18.2	25.5	29.1	34
Sodium (Dissolved)	mg/L	314	106	140	245	442	635

MEL-20	Sample date	Annual Average				5/29/2022	6/19/2022	7/17/2022	8/8/2022	9/11/2022	10/2/2022
Parameter	Unit	2019	2020	2021	2022	C2F1204	C2H5612	C2K5938	C2N1425	C2Q7606	C2T0638
Field Measured											
Temperature	°C	6.49	6.24	5.58	8.0	0.8	6	15.2	16.7	7.7	1.8
pH	pH units	7.72	7.75	7.87	7.38	7.18	7.63	7.6	7.75	6.78	7.33
Conductivity	uS/cm	1607.59	2112.41	2619.00	5,503	1036	3422	5311	5940	5154	12154
Dissolved oxygen	mg/L	9.47	10.64	10.68	10.84	11.74	10.73	-	-	9.6	11.27
Dissolved oxygen	%	78.88	84.77	88.20	83.4	82.5	87.3	81.1	80.4	84.3	85
Conventional Parameters											
pH	pH units	7.73	7.74	7.77	7.76	7.4	7.69	7.85	7.93	7.73	7.94
Turbidity	NTU	125.00	9.76	12.62	7	3	17	2.5	0.8	1.7	18
Hardness, as CaCO3	mg/L	259.75	395.70	382.50	766	163	328	921	1160	955	1070
Total alkalinity, as CaCO3	mg/L	72.88	72.14	85.17	88	61	64	96	99	86	120
TDS	mg/L	839.38	1183.57	1037.50	2,258	510	1250	2970	3630	2450	2740
TDS, calculated	mg/L	-	-	1253.33	2,355	530	1100	3000	3700	2600	3200
TSS	mg/L	92.75	16.86	20.00	15	10	28	7	3	13	26
Major Ions											
Chloride	mg/L	273.75	419.14	391.67	982	150	440	1300	1600	1100	1300
Cyanide	mg/L	0.02	0.02	0.01	0.01597	0.0494	0.00914	0.00365	0.00432	0.0173	0.012
Fluoride	mg/L	140.38	0.11	0.09	0.15	< 0.10	0.13	0.2	0.23	0.15	0.16
Silica	mg/L	-	-	2.7	3.7	1.3	2	2.1	1.2	5.7	9.6
Sulfate	mg/L	0.14	227.14	243.33	418	140	200	460	600	540	570
Nutrients and Chlorophyll a											
Ammonia Nitrogen (as N)	mg/L	4.84	7.54	7.98	11.8	5.1	7.5	16	15	9.1	18
Nitrate (as N)	mg/L	8.04	11.77	11.95	35.37	5.59	15.8	47.8	58.8	37.5	46.7
Nitrite (as N)	mg/L	0.19	0.28	0.23	0.857	0.08	0.142	1.41	2.15	0.817	0.54
Total phosphorus	mg/L	0.22	0.08	0.07	0.04	0.037	0.03	0.022	0.023	0.05	0.062
Orthophosphate (P)	mg/L	0.06	0.06	0.07	0.024	0.041	0.011	0.024	0.042	0.021	< 0.010
Total Metals											
Aluminum	mg/L	2.00863	0.31857	0.25593	0.2391	0.275	0.4	0.0985	0.034	0.194	0.433
Arsenic	mg/L	0.09328	0.20380	0.23905	0.1005	0.231	0.083	0.0924	0.0781	0.0654	0.0529
Barium	mg/L	0.05994	0.05099	0.05925	0.0730	0.0219	0.0366	0.0871	0.0942	0.0831	0.115
Cadmium	mg/L	0.00005	0.00004	0.00007	0.000157	0.000025	0.000062	0.000175	0.000303	0.000177	0.0002
Chromium	mg/L	0.00618	0.00096	0.00072	0.0012	< 0.0010	< 0.0010	< 0.0010	< 0.0050	< 0.0020	< 0.0040
Copper	mg/L	0.01182	0.01014	0.00844	0.00980	0.0208	0.00582	0.0079	0.0076	0.0079	0.0088
Iron	mg/L	3.20175	0.60300	0.64867	0.529	0.644	0.852	0.203	0.051	0.393	1.03
Lead	mg/L	0.00613	0.00559	0.00700	0.00549	0.00775	0.0123	0.00577	< 0.0010	0.00298	0.00366
Manganese	mg/L	0.22208	0.36114	0.30133	0.468	0.148	0.32	0.621	0.405	0.575	0.74
Mercury	mg/L	0.00001	0.00002	0.00001	0.000005	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.00670	0.00601	0.00693	0.0068	0.0072	0.0033	0.0081	0.0092	0.006	0.0069
Nickel	mg/L	0.02458	0.02150	0.01995	0.0384	0.0088	0.0259	0.0473	0.0555	0.0398	0.0529
Selenium	mg/L	0.00040	0.00181	0.00481	0.00243	0.00112	0.00111	0.00278	0.00335	0.00295	0.00324
Silver	mg/L	0.00006	0.00002	0.00002	0.000030	0.000036	0.000021	< 0.000020	< 0.00010	< 0.000040	< 0.000080
Thallium	mg/L	0.00006	0.00002	0.00002	0.00003	0.00001	0.000017	0.000045	< 0.000050	0.000046	0.000056
Zinc	mg/L	0.01595	0.00330	0.00292	0.0058	< 0.0050	< 0.0050	< 0.0050	< 0.025	< 0.010	< 0.020
Dissolved Metals											
Calcium (Dissolved)	mg/L	74.60	104.14	105.40	187.6	48.5	88	216	264	243	266
Magnesium (Dissolved)	mg/L	25.88	33.19	28.35	66.9	11.5	32.3	85.5	102	76.3	93.6
Potassium (Dissolved)	mg/L	14.52	16.15	15.70	29.52	9.12	15.1	38.3	43.8	31.9	38.9
Sodium (Dissolved)	mg/L	175.80	228.99	214.33	489	113	238	646	775	512	648

QAQC MEL-20	Sample Date		5/29/2022					
Parameter	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters								
pH	pH units		5.76	-	7.49	7.4	1.21	-
Turbidity	NTU	0.1	0.1	0.1	3.1	3	3.28	0.00
Hardness, as CaCO3	mg/L	0.5	0.5	-	178	163	8.80	-
Hardness, as CaCO3 (dissolved)	mg/L	0.5	0.91	-	165	169	2.40	-
Total alkalinity, as CaCO3	mg/L	1	1	1	62	61	1.63	0.00
TDS	mg/L	10	10	10	515	510	0.98	0.00
TDS, calculated	mg/L	1	1	-	530	530	0.00	-
TSS	mg/L	1	1	1	10	10	0.00	0.00
Major Ions								
Chloride	mg/L	1	1	1	150	150	0.00	0.00
Cyanide	mg/L	0.0005	0.0005	0.0005	0.0397	0.0494	21.77	0.00
Cyanide (free)	mg/L	0.002	0.002	0.002	0.019	0.02	5.13	0.00
Cyanide (WAD)	mg/L	0.0005	0.0005	0.0005	0.023	0.024	4.26	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00
Silica	mg/L	0.05	0.05	0.05	1.3	1.3	0.00	0.00
Sulfate	mg/L	0.5	0.5	0.5	140	140	0.00	0.00
Nutrients and Chlorophyll a								
Ammonia Nitrogen (as N)	mg/L	0.05	0.068	0.05	5.1	5.1	0.00	30.51
Nitrate (as N)	mg/L	0.1	0.1	0.1	5.57	5.59	0.36	0.00
Nitrite (as N)	mg/L	0.01	0.01	0.01	0.078	0.08	2.53	0.00
Nitrate + nitrite (as N)	mg/L	0.1	0.1	-	5.65	5.67	0.35	-
Total phosphorus	mg/L	0.004	0.004	0.004	0.035	0.037	5.56	0.00
Orthophosphate (P)	mg/L	0.01	0.01	0.01	0.047	0.041	13.64	0.00
Total Metals								
Aluminum	mg/L	0.003	0.003	0.003	0.302	0.275	9.36	0.00
Antimony	mg/L	0.0005	0.0005	0.0005	0.00112	0.00108	3.64	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.245	0.231	5.88	0.00
Barium	mg/L	0.001	0.001	0.001	0.0244	0.0219	10.80	0.00
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Bismuth	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Boron	mg/L	0.05	0.05	0.05	0.114	0.107	6.33	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00003	0.000025	18.18	0.00
Calcium (total)	mg/L	0.05	0.05	-	51.6	46.6	10.18	-
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Cobalt	mg/L	0.0002	0.0002	0.0002	0.00543	0.0052	4.33	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.0218	0.0208	4.69	0.00
Iron	mg/L	0.01	0.01	0.01	0.752	0.644	15.47	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.00857	0.00775	10.05	0.00

QAQC MEL-20	Sample Date		5/29/2022					
Parameter	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Molybdenum	mg/L	0.001	0.001	0.001	0.0074	0.0078	5.26	0.00
Nickel	mg/L	0.001	0.001	0.001	0.0079	0.008	1.26	0.00
Potassium (Dissolved)	mg/L	0.05	0.05	-	9.04	9.12	0.88	-
Selenium	mg/L	0.0001	0.0001	0.0001	0.00117	0.00115	1.72	0.00
Silicon	mg/L	0.1	0.1	0.1	0.6	0.63	4.88	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.000037	0.000037	0.00	0.00
Sodium (Dissolved)	mg/L	0.05	0.05	-	110	113	2.69	-
Strontium	mg/L	0.001	0.001	0.001	0.332	0.353	6.13	0.00
Sulphur	mg/L	3	3	-	48.4	49	1.23	-
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Tin	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Titanium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.00148	0.00155	4.62	0.00
Vanadium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Zirconium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
% Exceedance*							1%	0%

Footnotes:

RPD = Relative Percent Difference; MDL: Method Detection Limit

All value "<DL" have been replaced by "DL".

* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.

Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.

Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.

Italic values correspond to a RPD higher than 20% and for which one of the result is within 10X the MDL and the other one exceeds 10x the MDL.

MEL-21	Sample date	Annual Average				5/29/2022	6/19/2022	7/17/2022	8/8/2022	9/11/2022	10/2/2022
Parameter	Unit	2019	2020	2021	2022	C2F1192	C2H5653	C2K5950	C2N1398	C2Q7552	C2T0625
Field Measured											
Temperature	°C	7.61	6.67	5.94	7.5	1.8	5.2	14.3	14.8	7.1	1.9
pH	pH units	8.05	7.68	7.89	7.71	7.53	7.61	7.95	-	7.64	7.84
Conductivity	uS/cm	1701.19	2431.81	1961.45	2,741.98	13.88	2347	1910	1565	3130	7486
Dissolved oxygen	mg/L	9.88	10.94	38.94	33.23	99.8	10.3	-	-	9.65	13.16
Dissolved oxygen	%	91.46	89.30	63.81	171.4	575.9	86.1	98.8	88	82.3	97.4
Conventional Parameters											
pH	pH units	7.85	7.75	7.87	7.85	7.47	7.67	7.96	8.17	7.88	7.95
Turbidity	NTU	58.17	6.60	15.92	7.0	8.9	13	10	3.3	5.1	1.7
Hardness, as CaCO3	mg/L	297.00	606.29	488.33	577	127	816	420	431	716	950
Total alkalinity, as CaCO3	mg/L	83.29	83.86	81.50	110	63	110	89	120	130	150
TDS	mg/L	957.14	1281.43	1159.17	1,389	295	2220	1020	1030	1780	1990
TDS, calculated	mg/L	-	-	1366.67	1,320	290	2000	1000	930	1700	2000
TSS	mg/L	42.71	15.43	28.50	18	19	34	26	10	14	6
Major Ions											
Chloride	mg/L	334.29	468.57	415.00	507	71	840	400	320	620	790
Cyanide	mg/L	0.01	0.01	0.01	0.02966	0.0504	0.0253	0.006	0.00319	0.0894	0.00364
Fluoride	mg/L	0.14	0.12	0.11	0.13	< 0.10	0.15	0.14	0.16	0.13	0.16
Silica	mg/L	-	-	4.37	4.5	1.5	5.3	3.2	2.8	7.5	6.7
Sulfate	mg/L	132.14	188.43	215.83	284	73	390	220	190	390	440
Nutrients and Chlorophyll a											
Ammonia Nitrogen (as N)	mg/L	1.99	0.52	0.64	2.75	1.6	0.98	0.2	0.11	11	2.6
Nitrate (as N)	mg/L	2.71	1.51	3.96	8.70	1.62	14.4	5.4	2.79	16.6	11.4
Nitrite (as N)	mg/L	0.09	0.02	0.04	0.143	0.046	0.084	0.066	0.027	0.447	0.189
Total phosphorus	mg/L	0.09	0.02	0.04	0.028	0.03	< 0.020	0.022	< 0.020	0.059	0.035
Orthophosphate (P)	mg/L	0.02	0.02	0.01	0.010	0.028	< 0.010	< 0.010	< 0.010	0.013	< 0.010
Total Metals											
Aluminum	mg/L	0.86486	0.24541	0.47067	0.313	0.337	0.526	0.53	0.159	0.249	0.076
Arsenic	mg/L	0.02993	0.11237	0.06500	0.0762	0.226	0.0789	0.0459	0.033	0.0422	0.0312
Barium	mg/L	0.04710	0.08844	0.06827	0.0779	0.0155	0.11	0.0566	0.0702	0.112	0.103
Cadmium	mg/L	0.00004	0.00007	0.00006	0.000041	0.000011	0.000072	0.000027	0.000022	0.000034	0.00008
Chromium	mg/L	0.00247	0.00086	0.00123	0.0011	0.0013	< 0.0020	0.0015	< 0.0010	< 0.0010	< 0.0040
Copper	mg/L	0.00744	0.00697	0.00555	0.0097	0.0296	0.0092	0.00558	0.00449	0.00397	0.0054
Iron	mg/L	1.38200	0.47529	1.01917	0.868	1.03	1.3	0.977	0.507	1.03	0.362
Lead	mg/L	0.00195	0.00566	0.00752	0.00470	0.00842	0.00863	0.00295	0.00241	0.00354	0.00223
Manganese	mg/L	0.12273	0.33914	0.20467	0.3377	0.0524	0.549	0.239	0.195	0.442	0.549
Mercury	mg/L	0.00001	0.00002	0.00001	0.000005	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.01834	0.00954	0.00577	0.0082	0.0048	0.0084	0.0082	0.0079	0.0096	0.0105
Nickel	mg/L	0.01971	0.02683	0.02010	0.0240	0.0054	0.0337	0.0168	0.0152	0.0296	0.0433
Selenium	mg/L	0.00032	0.00039	0.00048	0.00068	0.00056	0.00114	0.00057	0.00034	0.00069	0.0008
Silver	mg/L	0.00003	0.00001	0.00002	0.000025	0.000037	< 0.000040	< 0.000020	0.00003	< 0.000020	< 0.000080
Thallium	mg/L	0.00003	0.00001	0.00002	0.000019	< 0.000010	0.000025	0.000019	0.000014	0.000028	< 0.000040
Zinc	mg/L	0.00639	0.00321	0.00325	0.0051	0.0053	< 0.010	< 0.0050	0.0054	< 0.0050	< 0.020
Dissolved Metals											
Calcium (Dissolved)	mg/L	79.82000	188.43000	136.68333	152.5	36.2	199	104	117	208	251
Magnesium (Dissolved)	mg/L	26.55000	34.51000	34.93333	42.60	6.57	66.5	32.2	31.3	51	68
Potassium (Dissolved)	mg/L	16.27000	13.73000	12.87167	19.60	5.51	25.2	12.87167	13.1	33.9	25
Sodium (Dissolved)	mg/L	185.67000	140.97000	169.78333	233	49	385	191	161	287	325

QAQC MEL-21 Parameter	Sample Date		6/19/2022						7/17/2022					
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters														
pH	pH units		5.62	-	7.75	7.67	1.04	-	5.77	-	8.06	7.96	1.25	-
Turbidity	NTU	0.1	0.1	0.1	28	13	73.17	0.00	0.6	0.1	10	10	0.00	142.86
Hardness, as CaCO3	mg/L	0.5	0.5	-	770	816	5.80	-	0.5	-	417	420	0.72	-
Hardness, as CaCO3 (dissolved)	mg/L	0.5	0.5	-	770	770	0.00	-	0.5	-	390	393	0.77	-
Total alkalinity, as CaCO3	mg/L	1	1	1	110	110	0.00	0.00	1	1	91	89	2.22	0.00
TDS	mg/L	10	10	10	2240	2220	0.90	0.00	10	10	1060	1020	3.85	0.00
TDS, calculated	mg/L	1	1	-	2000	2000	0.00	-	1	-	1000	1000	0.00	-
TSS	mg/L	1	1	1	37	34	8.45	0.00	1	1	22	26	16.67	0.00
Major Ions														
Chloride	mg/L	1	1	1	850	840	1.18	0.00	1	1	390	400	2.53	0.00
Cyanide	mg/L	0.0005	0.00235	0.0005	0.0237	0.0253	6.53	129.82	0.0005	0.0005	0.00612	0.006	1.98	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.15	0.15	0.00	0.00	0.1	0.1	0.14	0.14	0.00	0.00
Silica	mg/L	0.05	0.05	0.05	5	5.3	5.83	0.00	0.05	0.05	3.3	3.2	3.08	0.00
Sulfate	mg/L	0.5	0.5	0.5	390	390	0.00	0.00	0.5	0.5	220	220	0.00	0.00
Nutrients and Chlorophyll a														
Ammonia Nitrogen (as N)	mg/L	0.05	0.05	0.05	0.99	0.98	1.02	0.00	0.05	0.05	0.17	0.2	16.22	0.00
Nitrate (as N)	mg/L	0.1	0.1	0.1	13.7	14.4	4.98	0.00	0.1	0.1	5.45	5.4	0.92	0.00
Nitrite (as N)	mg/L	0.01	0.01	0.01	0.086	0.084	2.35	0.00	0.01	0.01	0.065	0.066	1.53	0.00
Nitrate + nitrite (as N)	mg/L	0.1	0.1	-	13.8	14.5	4.95	-	0.1	-	5.52	5.47	0.91	-
Total phosphorus	mg/L	0.02	0.02	0.02	0.026	0.02	26.09	0.00	0.02	0.02	0.027	0.022	20.41	0.00
Orthophosphate (P)	mg/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.00
Total Metals														
Aluminum	mg/L	0.003	0.003	0.003	0.422	0.526	21.94	0.00	0.003	0.003	0.468	0.53	12.42	0.00
Antimony	mg/L	0.0005	0.0005	0.0005	0.00156	0.0016	2.53	0.00	0.0005	0.0005	0.00155	0.0016	3.17	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0723	0.0789	8.73	0.00	0.0001	0.0001	0.0439	0.0459	4.45	0.00
Barium	mg/L	0.001	0.001	0.001	0.107	0.11	2.76	0.00	0.001	0.001	0.0577	0.0566	1.92	0.00
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0002	66.67	0.00	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Bismuth	mg/L	0.001	0.001	0.001	0.001	0.002	66.67	0.00	0.001	0.001	0.001	0.001	0.00	0.00
Boron	mg/L	0.05	0.05	0.05	0.162	0.18	10.53	0.00	0.05	0.05	0.151	0.151	0.00	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.000067	0.000072	7.19	0.00	0.00001	0.00001	0.000028	0.000027	3.64	0.00
Calcium (total)	mg/L	0.05	0.053	-	205	216	5.23	-	0.16	-	112	113	0.89	-
Chromium	mg/L	0.001	0.001	0.001	0.0012	0.002	50.00	0.00	0.001	0.001	0.0014	0.0015	6.90	0.00
Cobalt	mg/L	0.0002	0.0002	0.0002	0.00795	0.00862	8.09	0.00	0.0002	0.0002	0.00423	0.00423	0.00	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.00823	0.0092	11.13	0.00	0.0005	0.0005	0.00536	0.00558	4.02	0.00
Iron	mg/L	0.01	0.01	0.01	1.07	1.3	19.41	0.00	0.01	0.01	0.898	0.977	8.43	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.00828	0.00863	4.14	0.00	0.0002	0.0002	0.003	0.00295	1.68	0.00
Lithium	mg/L	0.002	0.002	0.002	0.0231	0.0243	5.06	0.00	0.002	0.002	0.0162	0.0159	1.87	0.00
Magnesium (total)	mg/L	0.05	0.05	-	62.3	66.9	7.12	-	0.05	-	33.6	33.4	0.60	-
Manganese	mg/L	0.001	0.001	0.001	0.501	0.549	9.14	0.00	0.001	0.001	0.243	0.239	1.66	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.0081	0.0084	3.64	0.00	0.001	0.001	0.0083	0.0082	1.21	0.00
Nickel	mg/L	0.001	0.001	0.001	0.0305	0.0337	9.97	0.00	0.001	0.001	0.0172	0.0168	2.35	0.00
Potassium (total)	mg/L	0.05	0.05	-	25.7	27	4.93	-	0.05	-	15.3	15.4	0.65	-
Selenium	mg/L	0.0001	0.0001	0.0001	0.00108	0.00114	5.41	0.00	0.0001	0.0001	0.00055	0.00057	3.57	0.00
Silicon	mg/L	0.1	0.1	0.1	3.15	3.22	2.20	0.00	0.1	0.1	2.3	2.5	8.33	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00004	66.67	0.00	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Sodium (total)	mg/L	0.05	0.059	-	383	408	6.32	-	0.05	-	204	201	1.48	-
Strontium	mg/L	0.001	0.001	0.001	1.47	1.44	2.06	0.00	0.001	0.001	0.759	0.77	1.44	0.00
Sulphur	mg/L	3	3	-	133	143	7.25	-	3	-	76.3	75	1.72	-
Thallium	mg/L	0.00001	0.00001	0.00001	0.00002	0.000025	22.22	0.00	0.00001	0.00001	0.000019	0.000019	0.00	0.00
Tin	mg/L	0.005	0.005	0.005	0.005	0.01	66.67	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Titanium	mg/L	0.005	0.005	0.005	0.0225	0.029	25.24	0.00	0.005	0.005	0.0284	0.0306	7.46	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.0061	0.00626	2.59	0.00	0.0001	0.0001	0.00505	0.00508	0.59	0.00
Vanadium	mg/L	0.005	0.005	0.005	0.005	0.01	66.67	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.01	66.67	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Zirconium	mg/L	0.0001	0.0001	0.0001	0.00064	0.00068	6.06	0.00	0.0001	0.0001	0.00061	0.00062	1.63	0.00
Dissolved Metals														
Aluminum	mg/L	0.003	0.003	0.003	0.0094	0.361	189.85	0.00	0.003	0.003	0.0137	0.0132	3.72	0.00
Antimony	mg/L	0.0005	0.0005	0.0005	0.0016	0.0015	6.45	0.00	0.0005	0.0005	0.00169	0.00171	1.18	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0384	0.0801	70.38	0.00	0.0001	0.0001	0.0269	0.0273	1.48	0.00
Barium	mg/L	0.001	0.001	0.001	0.0999	0.105	4.98	0.00	0.001	0.001	0.0509	0.0523	2.71	0.00
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0002	0.0002	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.00	0.00

QAQC MEL-21 Parameter	Sample Date		6/19/2022						7/17/2022					
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Bismuth	mg/L	0.001	0.001	0.001	0.002	0.002	0.00	0.00	0.001	0.001	0.001	0.001	0.00	0.00
Boron	mg/L	0.05	0.05	0.05	0.17	0.17	0.00	0.00	0.05	0.05	0.136	0.136	0.00	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.000063	0.000075	17.39	0.00	0.00001	0.00001	0.000019	0.00002	5.13	0.00
Calcium (Dissolved)	mg/L	0.05	0.05	-	200	199	0.50	-	0.176	-	104	104	0.00	-
Chromium	mg/L	0.001	0.001	0.001	0.002	0.002	0.00	0.00	0.001	0.001	0.001	0.001	0.00	0.00
Cobalt	mg/L	0.0002	0.0002	0.0002	0.00697	0.00814	15.49	0.00	0.0002	0.0002	0.0029	0.00294	1.37	0.00
Copper	mg/L	0.0002	0.0002	0.0002	0.00593	0.00833	33.66	0.00	0.0002	0.0002	0.00325	0.00329	1.22	0.00
Iron	mg/L	0.005	0.0115	0.005	0.012	0.931	194.91	78.79	0.0057	0.005	0.005	0.005	0.00	13.08
Lead	mg/L	0.0002	0.0002	0.0002	0.0004	0.00843	181.88	0.00	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Lithium	mg/L	0.002	0.002	0.002	0.0235	0.0234	0.43	0.00	0.002	0.002	0.013	0.013	0.00	0.00
Magnesium (Dissolved)	mg/L	0.05	0.05	-	65.5	66.5	1.52	-	0.05	-	31.7	32.2	1.56	-
Manganese	mg/L	0.001	0.001	0.001	0.488	0.506	3.62	0.00	0.001	0.001	0.209	0.207	0.96	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.008	0.0078	2.53	0.00	0.001	0.001	0.0082	0.0081	1.23	0.00
Nickel	mg/L	0.001	0.001	0.001	0.0284	0.0313	9.72	0.00	0.001	0.001	0.0134	0.0137	2.21	0.00
Potassium (Dissolved)	mg/L	0.05	0.05	-	25.4	25.2	0.79	-	0.05	-	14.5	14.9	2.72	-
Selenium	mg/L	0.0001	0.0001	0.0001	0.001	0.00101	1.00	0.00	0.0001	0.0001	0.00054	0.00055	1.83	0.00
Silicon	mg/L	0.1	0.1	0.1	2.52	3	17.39	0.00	0.1	0.1	1.52	1.51	0.66	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00004	0.00004	0.00	0.00	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Sodium (Dissolved)	mg/L	0.05	0.05	-	384	385	0.26	-	0.05	-	191	191	0.00	-
Strontium	mg/L	0.001	0.001	0.001	1.38	1.35	2.20	0.00	0.001	0.001	0.736	0.736	0.00	0.00
Sulphur	mg/L	3	3	-	135	136	0.74	-	3	-	73.5	73	0.68	-
Thallium	mg/L	0.00001	0.00001	0.00001	0.0002	0.0002	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Tin	mg/L	0.005	0.005	0.005	0.01	0.01	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Titanium	mg/L	0.005	0.005	0.005	0.01	0.018	57.14	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.00616	0.00618	0.32	0.00	0.0001	0.0001	0.00487	0.00488	0.21	0.00
Vanadium	mg/L	0.005	0.005	0.005	0.01	0.01	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.01	0.01	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Zirconium	mg/L	0.0001	0.0001	0.0001	0.00026	0.00068	89.36	0.00	0.0001	0.0001	0.00014	0.00013	7.41	0.00
% Exceedance*							5%	0%					0%	0%

Footnotes:

RPD = Relative Percent Difference; MDL: Method Detection Limit

All value "<DL" have been replaced by "DL".

* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.

Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.

Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.

Italic values correspond to a RPD higher than 20% and for which one of the result is within 10X the MDL and the other one exceeds 10x the MDL.

MEL-22	Sample date	Annual Average					5/29/2022	6/19/2022	7/17/2022	8/8/2022	9/11/2022	10/2/2022
Parameter	Unit	2018	2019	2020	2021	2022	C2F1192	C2H5556	C2K6035	C2N1394	C2Q7561	C2T0542
Field Measured												
Temperature	°C	-	7.13	11.54	7.76	9.0	7	9.6	13.2	13.2	6.7	4.3
pH	pH units	-	7.56	7.78	8.14	7.48	7.29	7.93	7.09	7.09	7.72	7.76
Conductivity	uS/cm	-	5591.57	5327.00	2896.08	6,472	10.01	4272	8907	8907	4638	12099
Dissolved oxygen	mg/L	-	11.58	9.91	11.60	34.57	83	-	-	-	8.83	11.88
Dissolved oxygen	%	-	102.40	89.48	96.22	431.1	2176	83.5	77.8	77.8	75.6	95.8
Conventional Parameters												
pH	pH units	7.51	7.65	7.70	7.91	7.72	7.47	7.75	7.8	7.61	7.81	7.87
Turbidity	NTU	4.19	3.83	2.94	2.22	1.1	0.7	0.3	0.5	1.2	1.8	2
Hardness, as CaCO3	mg/L	2172.43	1285.57	1087.88	852.50	1,418	552	983	1250	2950	1230	1540
Total alkalinity, as CaCO3	mg/L	65.43	60.00	73.88	94.67	74	70	76	66	61	74	99
TDS	mg/L	5335.36	3468.57	2889.38	2223.33	3,213	1260	2490	2980	6620	2910	3020
TDS, calculated	mg/L	-	-	-	2166.67	2,917	1200	2200	2700	5600	2500	3300
TSS	mg/L	12.64	6.43	8.13	5.00	4	2	3	3	6	5	5
Major Ions												
Chloride	mg/L	2895.71	1590.00	1327.50	1023.33	1,455	530	1100	1400	3000	1100	1600
Cyanide	mg/L	0.01	0.01	0.01	0.01	0.00133	0.00122	0.00142	0.00179	0.00109	0.00135	0.00111
Fluoride	mg/L	0.10	0.10	0.11	0.12	0.08	< 0.10	< 0.10	0.12	0.13	0.1	< 0.10
Silica	mg/L	-	-	-	1.71	1.69	1.3	1.5	2	< 0.25	3.1	2.1
Sulfate	mg/L	297.43	240.00	213.88	285.00	398	170	280	320	710	450	460
Nutrients and Chlorophyll a												
Ammonia Nitrogen (as N)	mg/L	18.18	10.73	7.61	3.88	1.04	1.6	1.2	0.69	0.25	1.1	1.4
Nitrate (as N)	mg/L	28.58	15.66	19.08	12.13	4.64	4.05	4.33	2.4	3.08	6.91	7.06
Nitrite (as N)	mg/L	0.40	0.22	0.47	0.28	0.083	0.064	0.134	0.135	0.022	0.107	0.037
Total phosphorus	mg/L	0.04	0.04	0.03	0.02	0.016	0.015	0.021	< 0.020	< 0.020	0.027	< 0.020
Orthophosphate (P)	mg/L	0.01	0.01	0.01	0.01	0.006	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.013
Total Metals												
Aluminum	mg/L	0.11182	0.08091	0.15640	0.03765	0.0238	0.0289	0.01	0.0057	0.02	0.0582	0.02
Arsenic	mg/L	0.00483	0.00406	0.01172	0.00692	0.00498	0.00388	0.00318	0.00423	0.0054	0.00852	0.00469
Barium	mg/L	0.20231	0.09297	0.08998	0.06870	0.1019	0.0477	0.0673	0.0898	0.219	0.0903	0.097
Cadmium	mg/L	0.00031	0.00014	0.00010	0.00005	0.000044	0.00004	0.000033	0.000039	< 0.000050	0.000061	0.000065
Chromium	mg/L	0.00642	0.00314	0.00288	0.00092	0.0013	< 0.0010	< 0.0020	< 0.0010	< 0.0050	< 0.0020	< 0.0050
Copper	mg/L	0.01398	0.00413	0.00369	0.00315	0.00386	0.00238	0.0029	0.0037	0.0062	0.0045	0.0035
Iron	mg/L	0.31382	0.23971	0.32888	0.15883	0.221	0.076	0.065	0.195	0.215	0.353	0.424
Lead	mg/L	0.00158	0.00079	0.00132	0.00030	0.00029	0.00024	< 0.00040	< 0.00020	< 0.0010	< 0.00040	< 0.0010
Manganese	mg/L	0.25662	0.16094	0.29361	0.17250	0.396	0.424	0.3	0.533	0.125	0.377	0.616
Mercury	mg/L	0.00004	0.00001	0.00004	0.00001	0.000005	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.00718	0.00363	0.00445	0.00557	0.0052	0.0032	0.0057	0.0087	0.0071	0.0039	< 0.0050
Nickel	mg/L	0.02365	0.01876	0.01898	0.01640	0.0236	0.0134	0.0203	0.0236	0.0321	0.0218	0.0305
Selenium	mg/L	0.00072	0.00033	0.00036	0.00055	0.000283	0.00032	0.00031	0.00028	< 0.00050	0.00029	< 0.00050
Silver	mg/L	0.00020	0.00007	0.00006	0.00002	0.000027	< 0.000020	< 0.000040	< 0.000020	< 0.00010	< 0.000040	< 0.00010
Thallium	mg/L	0.00017	0.00007	0.00006	0.00004	0.000050	0.000023	0.000055	0.00006	0.000094	0.000044	< 0.000050
Zinc	mg/L	0.03629	0.01579	0.01403	0.00625	0.0067	< 0.0050	< 0.010	< 0.0050	< 0.025	< 0.010	< 0.025
Dissolved Metals												
Calcium (Dissolved)	mg/L	613.16000	364.43000	308.65000	224.33333	379	162	276	317	714	369	437
Magnesium (Dissolved)	mg/L	130.24000	84.07000	75.43000	63.03333	87.6	33.6	65.5	83.6	162	71.8	109
Potassium (Dissolved)	mg/L	55.16000	33.39000	32.96000	34.35000	36.5	15.7	28.6	36.5	65.6	33.8	38.8
Sodium (Dissolved)	mg/L	791.58000	540.29000	472.75000	414.00000	470	192	362	459	896	387	526

QAQC MEL-22 Parameter	Sample Date		8/8/2022						10/2/2022					
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters														
pH	pH units		5.84	-	7.71	7.61	1.31	-	5.58	-	7.86	7.87	0.13	-
Turbidity	NTU	0.1	0.1	0.1	1.3	1.2	8.00	0.00	0.1	0.1	2.2	2	9.52	0.00
Hardness, as CaCO3	mg/L	0.5	0.5	-	2930	2950	0.68	-	0.5	-	1500	1540	2.63	-
Hardness, as CaCO3 (dissolved)	mg/L	0.5	0.5	-	2430	2450	0.82	-	0.5	-	1480	1540	3.97	-
Total alkalinity, as CaCO3	mg/L	1	1	1	59	61	3.33	0.00	1.4	1	97	99	2.04	33.33
TDS	mg/L	10	10	10	6380	6620	3.69	0.00	10	10	3590	3020	17.25	0.00
TDS, calculated	mg/L	1	1	-	5600	5600	0.00	-	1	-	3000	3300	9.52	-
TSS	mg/L	1	1	1	6	6	0.00	0.00	1	1	6	5	18.18	0.00
Major Ions														
Chloride	mg/L	1	1	1	3000	3000	0.00	0.00	1	1	1400	1600	13.33	0.00
Cyanide	mg/L	0.0005	0.0005	0.0005	0.00159	0.00109	37.31	0.00	0.0005	0.0005	0.0186	0.00111	177.47	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.16	0.13	20.69	0.00	0.1	0.1	0.12	0.1	18.18	0.00
Silica	mg/L	0.05	0.05	0.05	0.25	0.25	0.00	0.00	0.05	0.05	1.9	2.1	10.00	0.00
Sulfate	mg/L	0.5	0.5	0.5	710	710	0.00	0.00	0.5	0.5	440	460	4.44	0.00
Nutrients and Chlorophyll a														
Ammonia Nitrogen (as N)	mg/L	0.05	0.05	0.05	0.25	0.25	0.00	0.00	0.05	0.05	1.4	1.4	0.00	0.00
Nitrate (as N)	mg/L	0.1	0.1	0.1	3.09	3.08	0.32	0.00	0.1	0.1	7.12	7.06	0.85	0.00
Nitrite (as N)	mg/L	0.01	0.01	0.01	0.022	0.022	0.00	0.00	0.01	0.01	0.029	0.037	24.24	0.00
Nitrate + nitrite (as N)	mg/L	0.1	0.1	-	3.11	3.11	0.00	-	0.1	-	7.15	7.1	0.70	-
Total phosphorus	mg/L	0.02	0.02	0.02	0.02	0.02	0.00	0.00	0.02	0.02	0.02	0.02	0.00	0.00
Orthophosphate (P)	mg/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.013	26.09	0.00
Total Metals														
Aluminum	mg/L	0.003	0.003	0.003	0.018	0.02	10.53	0.00	0.003	0.003	0.0177	0.02	12.20	0.00
Antimony	mg/L	0.0005	0.0005	0.0005	0.0025	0.0025	0.00	0.00	0.0005	0.0005	0.001	0.0025	85.71	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.00519	0.0054	3.97	0.00	0.0001	0.0001	0.00453	0.00469	3.47	0.00
Barium	mg/L	0.001	0.001	0.001	0.215	0.219	1.84	0.00	0.001	0.001	0.0928	0.097	4.43	0.00
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0005	0.0005	0.00	0.00	0.0001	0.0001	0.0002	0.0005	85.71	0.00
Bismuth	mg/L	0.001	0.001	0.001	0.005	0.005	0.00	0.00	0.001	0.001	0.002	0.005	85.71	0.00
Boron	mg/L	0.05	0.05	0.05	0.75	0.66	12.77	0.00	0.05	0.05	0.34	0.32	6.06	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.000154	0.00005	101.96	0.00	0.00001	0.00001	0.000046	0.000065	34.23	0.00
Calcium (total)	mg/L	0.05	0.05	-	834	844	1.19	-	0.05	-	433	445	2.73	-
Chromium	mg/L	0.001	0.001	0.001	0.005	0.005	0.00	0.00	0.001	0.001	0.002	0.005	85.71	0.00
Cobalt	mg/L	0.0002	0.0002	0.0002	0.0012	0.0011	8.70	0.00	0.0002	0.0002	0.00249	0.0025	0.40	0.00
Copper	mg/L	0.0005	0.0067	0.0005	0.0067	0.0062	7.75	172.22	0.0005	0.0005	0.0035	0.0035	0.00	0.00
Iron	mg/L	0.01	0.01	0.01	0.228	0.215	5.87	0.00	0.01	0.01	0.452	0.424	6.39	0.00
Lead	mg/L	0.0002	0.00047	0.0002	0.001	0.001	0.00	80.60	0.0002	0.0002	0.0004	0.001	85.71	0.00
Lithium	mg/L	0.002	0.002	0.002	0.46	0.415	10.29	0.00	0.002	0.002	0.194	0.181	6.93	0.00
Magnesium (total)	mg/L	0.05	0.05	-	205	205	0.00	-	0.05	-	100	104	3.92	-
Manganese	mg/L	0.001	0.001	0.001	0.125	0.125	0.00	0.00	0.001	0.001	0.625	0.616	1.45	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.007	0.0071	1.42	0.00	0.001	0.001	0.004	0.005	22.22	0.00
Nickel	mg/L	0.001	0.0016	0.001	0.0318	0.0321	0.94	46.15	0.001	0.001	0.0298	0.0305	2.32	0.00
Potassium (total)	mg/L	0.05	0.05	-	82.5	83	0.60	-	0.05	-	37.5	37.6	0.27	-
Selenium	mg/L	0.0001	0.0001	0.0001	0.00052	0.0005	3.92	0.00	0.0001	0.0001	0.00026	0.0005	63.16	0.00
Silicon	mg/L	0.1	0.1	0.1	0.5	0.5	0.00	0.00	0.1	0.1	1.1	1.12	1.80	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.0001	0.0001	0.00	0.00	0.00002	0.00002	0.00004	0.0001	85.71	0.00
Sodium (total)	mg/L	0.05	0.05	-	1150	1150	0.00	-	0.05	-	522	516	1.16	-
Strontium	mg/L	0.001	0.001	0.001	13.5	13.6	0.74	0.00	0.001	0.001	6.12	6.24	1.94	0.00
Sulphur	mg/L	3	3	-	270	259	4.16	-	3	-	157	168	6.77	-
Thallium	mg/L	0.00001	0.00001	0.00001	0.000112	0.000094	17.48	0.00	0.00001	0.00001	0.000035	0.00005	35.29	0.00
Tin	mg/L	0.005	0.005	0.005	0.025	0.025	0.00	0.00	0.005	0.005	0.01	0.025	85.71	0.00
Titanium	mg/L	0.005	0.005	0.005	0.025	0.025	0.00	0.00	0.005	0.005	0.01	0.025	85.71	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.00864	0.00878	1.61	0.00	0.0001	0.0001	0.00588	0.00541	8.33	0.00
Vanadium	mg/L	0.005	0.005	0.005	0.025	0.025	0.00	0.00	0.005	0.005	0.01	0.025	85.71	0.00
Zinc	mg/L	0.005	0.0078	0.005	0.025	0.025	0.00	43.75	0.005	0.005	0.01	0.025	85.71	0.00
Zirconium	mg/L	0.0001	0.0001	0.0001	0.0005	0.0005	0.00	0.00	0.0001	0.0001	0.0002	0.0005	85.71	0.00
Dissolved Metals														
Aluminum	mg/L	0.003	0.003	0.003	0.015	0.015	0.00	0.00	0.003	0.003	0.015	0.015	0.00	0.00
Antimony	mg/L	0.0005	0.0005	0.0005	0.0025	0.0025	0.00	0.00	0.0005	0.0005	0.0025	0.0025	0.00	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.00431	0.00408	5.48	0.00	0.0001	0.0001	0.00258	0.00276	6.74	0.00
Barium	mg/L	0.001	0.001	0.001	0.2	0.196	2.02	0.00	0.001	0.001	0.0898	0.0948	5.42	0.00
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0005	0.0005	0.00	0.00	0.0001	0.0001	0.0005	0.0005	0.00	0.00

QAQC MEL-22 Parameter	Sample Date		8/8/2022						10/2/2022					
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Bismuth	mg/L	0.001	0.001	0.001	0.005	0.005	0.00	0.00	0.001	0.001	0.005	0.005	0.00	0.00
Boron	mg/L	0.05	0.05	0.05	0.61	0.63	3.23	0.00	0.05	0.05	0.32	0.31	3.17	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.000057	0.00005	13.08	0.00	0.00001	0.00001	0.00005	0.000057	13.08	0.00
Calcium (Dissolved)	mg/L	0.05	0.05	-	708	714	0.84	-	0.05	-	422	437	3.49	-
Chromium	mg/L	0.001	0.001	0.001	0.005	0.005	0.00	0.00	0.001	0.001	0.005	0.005	0.00	0.00
Cobalt	mg/L	0.0002	0.0006	0.0002	0.0013	0.001	26.09	100.00	0.0002	0.0002	0.0024	0.0024	0.00	0.00
Copper	mg/L	0.0002	0.00646	0.0002	0.0047	0.0046	2.15	187.99	0.0002	0.0002	0.0036	0.0034	5.71	0.00
Iron	mg/L	0.005	0.005	0.005	0.082	0.071	14.38	0.00	0.005	0.005	0.127	0.103	20.87	0.00
Lead	mg/L	0.0002	0.00042	0.0002	0.001	0.001	0.00	70.97	0.0002	0.0002	0.001	0.001	0.00	0.00
Lithium	mg/L	0.002	0.002	0.002	0.35	0.373	6.36	0.00	0.002	0.002	0.169	0.185	9.04	0.00
Magnesium (Dissolved)	mg/L	0.05	0.05	-	162	162	0.00	-	0.05	-	103	109	5.66	-
Manganese	mg/L	0.001	0.001	0.001	0.0984	0.0978	0.61	0.00	0.001	0.001	0.616	0.619	0.49	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.0063	0.0065	3.12	0.00	0.001	0.001	0.005	0.005	0.00	0.00
Nickel	mg/L	0.001	0.0016	0.001	0.0271	0.0266	1.86	46.15	0.001	0.001	0.0305	0.0296	3.00	0.00
Potassium (Dissolved)	mg/L	0.05	0.05	-	66.2	65.6	0.91	-	0.05	-	38.4	38.8	1.04	-
Selenium	mg/L	0.0001	0.0001	0.0001	0.0005	0.0005	0.00	0.00	0.0001	0.0001	0.0005	0.0005	0.00	0.00
Silicon	mg/L	0.1	0.1	0.1	0.5	0.5	0.00	0.00	0.1	0.1	0.92	0.85	7.91	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.0001	0.0001	0.00	0.00	0.00002	0.00002	0.0001	0.0001	0.00	0.00
Sodium (Dissolved)	mg/L	0.05	0.05	-	905	896	1.00	-	0.05	-	515	526	2.11	-
Strontium	mg/L	0.001	0.001	0.001	13.4	13.1	2.26	0.00	0.001	0.001	5.6	5.88	4.88	0.00
Sulphur	mg/L	3	3	-	219	216	1.38	-	3	-	160	162	1.24	-
Thallium	mg/L	0.00001	0.00001	0.00001	0.000071	0.00007	1.42	0.00	0.00001	0.00001	0.00005	0.00005	0.00	0.00
Tin	mg/L	0.005	0.005	0.005	0.025	0.025	0.00	0.00	0.005	0.005	0.025	0.025	0.00	0.00
Titanium	mg/L	0.005	0.005	0.005	0.025	0.025	0.00	0.00	0.005	0.005	0.025	0.025	0.00	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.0071	0.00709	0.14	0.00	0.0001	0.0001	0.00572	0.00585	2.25	0.00
Vanadium	mg/L	0.005	0.005	0.005	0.025	0.025	0.00	0.00	0.005	0.005	0.025	0.025	0.00	0.00
Zinc	mg/L	0.005	0.0077	0.005	0.025	0.025	0.00	42.52	0.005	0.005	0.025	0.025	0.00	0.00
Zirconium	mg/L	0.0001	0.0001	0.0001	0.0005	0.0005	0.00	0.00	0.0001	0.0001	0.0005	0.0005	0.00	0.00
% Exceedance*							0%	0%					1%	0%

Footnotes:

RPD = Relative Percent Difference; MDL: Method Detection Limit

All value "<DL" have been replaced by "DL".

* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.

Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.

Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.

Italic values correspond to a RPD higher than 20% and for which one of the result is within 10X the MDL and the other one exceeds 10x the MDL.

MEL-23	Sample date	Annual Average				6/19/2022	7/17/2022	8/8/2022	9/11/2022	10/2/2022
Parameter	Unit	2019	2020	2021	2022	C2H5634	C2K5974	C2N1370	C2Q7532	C2T0550
Field Measured										
Temperature	°C	10.97	11.41	5.08	9.5	5.5	15.8	16.1	7.2	2.9
pH	pH units	7.69	7.88	7.97	7.74	7.95	7.43	7.78	7.67	7.88
Conductivity	uS/cm	276.93	4688.86	5400.00	4,561	1225	1894	4117	5311	10256
Dissolved oxygen	mg/L	9.84	8.87	9.86	10.25	10.36	-	-	8.22	12.17
Dissolved oxygen	%	87.00	78.80	78.75	80.7	82.6	81.7	71.9	70.9	96.5
Conventional Parameters										
pH	pH units	7.83	7.95	7.93	7.87	7.58	7.9	7.92	7.98	7.95
Turbidity	NTU	0.60	30.14	18.77	2.4	5.7	1.9	0.4	2.5	1.3
Hardness, as CaCO3	mg/L	79.50	679.14	681.83	762	218	369	788	904	1530
Total alkalinity, as CaCO3	mg/L	41.33	158.57	115.17	116	44	76	130	140	190
TDS	mg/L	210.00	2521.43	1994.17	2,387	715	1050	2600	2670	4900
TDS, calculated	mg/L	-	-	2766.67	2,526	630	1100	2700	3000	5200
TSS	mg/L	1.33	42.14	21.17	9	13	4	2	20	7
Major Ions										
Chloride	mg/L	50.00	1107.14	736.67	960	210	340	950	1100	2200
Cyanide	mg/L	0.01	0.01	0.02	0.00213	0.00181	0.00134	0.00178	0.00265	0.00309
Fluoride	mg/L	0.10	0.26	0.20	0.21	< 0.10	0.2	0.27	0.26	0.26
Silica	mg/L	-	-	5.27	3.6	1.3	2	3.9	4.7	5.9
Sulfate	mg/L	5.33	351.29	485.00	572	160	280	710	710	1000
Nutrients and Chlorophyll a										
Ammonia Nitrogen (as N)	mg/L	0.08	5.33	9.38	5.0	2.7	1.8	6.2	5.2	9.3
Nitrate (as N)	mg/L	0.10	8.64	18.91	16.81	5.85	9.98	28.6	18.4	21.2
Nitrite (as N)	mg/L	0.01	0.31	0.22	0.440	0.089	0.364	0.68	0.554	0.512
Total phosphorus	mg/L	0.02	0.14	0.04	0.023	< 0.020	< 0.020	< 0.020	0.046	0.041
Orthophosphate (P)	mg/L	0.01	0.01	0.01	0.005	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total Metals										
Aluminum	mg/L	0.00963	1.33829	0.32533	0.180	0.251	0.123	0.0194	0.424	0.082
Arsenic	mg/L	0.00191	0.02077	0.01039	0.00949	0.00842	0.00809	0.00804	0.0118	0.0111
Barium	mg/L	0.02273	0.09450	0.05442	0.0532	0.0197	0.0312	0.0613	0.068	0.0858
Cadmium	mg/L	0.00004	0.00006	0.00007	0.000103	0.000037	0.000049	0.000101	0.000102	0.000226
Chromium	mg/L	0.00100	0.00540	0.00113	0.0011	< 0.0010	< 0.0010	< 0.0020	< 0.0020	< 0.0050
Copper	mg/L	0.00096	0.00732	0.01048	0.00466	0.00255	0.00313	0.0056	0.0053	0.0067
Iron	mg/L	0.19267	2.28529	0.63717	0.288	0.477	0.196	0.022	0.593	0.153
Lead	mg/L	0.00020	0.00263	0.00171	0.00076	0.00139	0.00053	0.00054	0.00083	< 0.0010
Manganese	mg/L	0.00870	0.40727	0.39850	0.418	0.154	0.182	0.377	0.501	0.876
Mercury	mg/L	0.00001	0.00005	0.00001	0.000005	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.00143	0.01463	0.01030	0.0100	0.0037	0.0074	0.013	0.0131	0.0127
Nickel	mg/L	0.00150	0.06100	0.06252	0.0678	0.0275	0.0423	0.0869	0.0783	0.104
Selenium	mg/L	0.00010	0.00125	0.00137	0.00142	0.00053	0.00091	0.0018	0.00159	0.00225
Silver	mg/L	0.00002	0.00005	0.00002	0.000022	< 0.000020	< 0.000020	< 0.000040	< 0.000040	< 0.00010
Thallium	mg/L	0.00001	0.00005	0.00003	0.000023	0.000016	0.000019	0.000024	0.000032	< 0.000050
Zinc	mg/L	0.00500	0.01484	0.00417	0.0055	< 0.0050	< 0.0050	< 0.010	< 0.010	< 0.025
Dissolved Metals										
Calcium (Dissolved)	mg/L	22.87000	119.17000	142.93333	159.6	46.1	84.9	178	198	291
Magnesium (Dissolved)	mg/L	5.63000	89.70000	75.30000	90.4	22.7	36	88.2	104	201

MEL-23	Sample date	Annual Average				6/19/2022	7/17/2022	8/8/2022	9/11/2022	10/2/2022
Parameter	Unit	2019	2020	2021	2022	C2H5634	C2K5974	C2N1370	C2Q7532	C2T0550
Potassium (Dissolved)	mg/L	1.92000	40.19000	39.58333	41.9	13.2	21.9	49.3	51.7	73.2
Sodium (Dissolved)	mg/L	19.77000	624.71000	414.83333	536	129	208	528	645	1170

QAQC MEL-23	Sample Date		9/11/2022					
Parameter	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters								
pH	pH units		5.79	-	8.03	7.98	0.62	-
Turbidity	NTU	0.1	0.1	0.1	3.9	2.5	43.75	0.00
Hardness, as CaCO3	mg/L	0.5	0.5	-	943	904	4.22	-
Hardness, as CaCO3 (dissolved)	mg/L	0.5	0.5	-	913	926	1.41	-
Total alkalinity, as CaCO3	mg/L	1	1	1	140	140	0.00	0.00
TDS	mg/L	10	10	10	2790	2670	4.40	0.00
TDS, calculated	mg/L	1	1	-	3000	3000	0.00	-
TSS	mg/L	1	1	1	16	20	22.22	0.00
Major Ions								
Chloride	mg/L	1	1	1	1100	1100	0.00	0.00
Cyanide	mg/L	0.0005	0.0005	0.0005	0.0033	0.00265	21.85	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.32	0.26	20.69	0.00
Silica	mg/L	0.05	0.05	0.05	4.8	4.7	2.11	0.00
Sulfate	mg/L	0.5	0.5	0.5	730	710	2.78	0.00
Nutrients and Chlorophyll a								
Ammonia Nitrogen (as N)	mg/L	0.05	0.05	0.05	5.2	5.2	0.00	0.00
Nitrate (as N)	mg/L	0.1	0.1	0.1	18.7	18.4	1.62	0.00
Nitrite (as N)	mg/L	0.01	0.01	0.01	0.558	0.554	0.72	0.00
Nitrate + nitrite (as N)	mg/L	0.1	0.1	-	19.3	18.9	2.09	-
Total phosphorus	mg/L	0.02	0.02	0.02	0.044	0.046	4.44	0.00
Orthophosphate (P)	mg/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Total Metals								
Aluminum	mg/L	0.003	0.003	0.003	0.369	0.424	13.87	0.00
Antimony	mg/L	0.0005	0.0005	0.0005	0.0033	0.0032	3.08	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0123	0.0118	4.15	0.00
Barium	mg/L	0.001	0.001	0.001	0.0683	0.068	0.44	0.00
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0002	0.0002	0.00	0.00
Bismuth	mg/L	0.001	0.001	0.001	0.002	0.002	0.00	0.00
Boron	mg/L	0.05	0.05	0.05	0.85	0.83	2.38	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.000117	0.000102	13.70	0.00
Calcium (total)	mg/L	0.05	0.05	-	202	192	5.08	-
Chromium	mg/L	0.001	0.001	0.001	0.002	0.002	0.00	0.00
Cobalt	mg/L	0.0002	0.0002	0.0002	0.0123	0.0121	1.64	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.0054	0.0053	1.87	0.00
Iron	mg/L	0.01	0.01	0.01	0.566	0.593	4.66	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.00086	0.00083	3.55	0.00
Lithium	mg/L	0.002	0.002	0.002	0.0225	0.0219	2.70	0.00
Magnesium (total)	mg/L	0.05	0.05	-	107	103	3.81	-

QAQC MEL-23	Sample Date		9/11/2022					
Parameter	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Manganese	mg/L	0.001	0.001	0.001	0.518	0.501	3.34	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.0136	0.0131	3.75	0.00
Nickel	mg/L	0.001	0.001	0.001	0.08	0.0783	2.15	0.00
Potassium (total)	mg/L	0.05	0.05	-	51.6	49.1	4.97	-
Selenium	mg/L	0.0001	0.0001	0.0001	0.00165	0.00159	3.70	0.00
Silicon	mg/L	0.1	0.1	0.1	2.93	3	2.36	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00004	0.00004	0.00	0.00
Sodium (total)	mg/L	0.05	0.05	-	650	632	2.81	-
Strontium	mg/L	0.001	0.001	0.001	1.75	1.66	5.28	0.00
Sulphur	mg/L	3	3	-	227	219	3.59	-
Thallium	mg/L	0.00001	0.00001	0.00001	0.000033	0.000032	3.08	0.00
Tin	mg/L	0.005	0.005	0.005	0.01	0.01	0.00	0.00
Titanium	mg/L	0.005	0.005	0.005	0.027	0.029	7.14	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.0231	0.0223	3.52	0.00
Vanadium	mg/L	0.005	0.005	0.005	0.01	0.01	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.01	0.01	0.00	0.00
Zirconium	mg/L	0.0001	0.0001	0.0001	0.00112	0.00108	3.64	0.00
Dissolved Metals								
Aluminum	mg/L	0.003	0.003	0.003	0.006	0.006	0.00	0.00
Antimony	mg/L	0.0005	0.0005	0.0005	0.0032	0.0033	3.08	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0109	0.0111	1.82	0.00
Barium	mg/L	0.001	0.001	0.001	0.069	0.0679	1.61	0.00
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0002	0.0002	0.00	0.00
Bismuth	mg/L	0.001	0.001	0.001	0.002	0.002	0.00	0.00
Boron	mg/L	0.05	0.05	0.05	0.83	0.82	1.21	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.000107	0.000115	7.21	0.00
Calcium (Dissolved)	mg/L	0.05	0.05	-	195	198	1.53	-
Chromium	mg/L	0.001	0.001	0.001	0.002	0.002	0.00	0.00
Cobalt	mg/L	0.0002	0.0002	0.0002	0.0115	0.0118	2.58	0.00
Copper	mg/L	0.0002	0.0002	0.0002	0.00448	0.00444	0.90	0.00
Iron	mg/L	0.005	0.005	0.005	0.01	0.01	0.00	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0004	0.0004	0.00	0.00
Lithium	mg/L	0.002	0.002	0.002	0.0219	0.0216	1.38	0.00
Magnesium (Dissolved)	mg/L	0.05	0.05	-	103	104	0.97	-
Manganese	mg/L	0.001	0.001	0.001	0.507	0.51	0.59	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.0138	0.0138	0.00	0.00
Nickel	mg/L	0.001	0.001	0.001	0.076	0.0776	2.08	0.00

QAQC MEL-23	Sample Date		9/11/2022					
Parameter	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Potassium (Dissolved)	mg/L	0.05	0.05	-	50.5	51.7	2.35	-
Selenium	mg/L	0.0001	0.0001	0.0001	0.00163	0.00162	0.62	0.00
Silicon	mg/L	0.1	0.1	0.1	2.19	2.18	0.46	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00004	0.00004	0.00	0.00
Sodium (Dissolved)	mg/L	0.05	0.05	-	642	645	0.47	-
Strontium	mg/L	0.001	0.001	0.001	1.75	1.76	0.57	0.00
Sulphur	mg/L	3	3	-	228	224	1.77	-
Thallium	mg/L	0.00001	0.00001	0.00001	0.00003	0.000029	3.39	0.00
Tin	mg/L	0.005	0.005	0.005	0.01	0.01	0.00	0.00
Titanium	mg/L	0.005	0.005	0.005	0.01	0.01	0.00	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.0231	0.0235	1.72	0.00
Vanadium	mg/L	0.005	0.005	0.005	0.01	0.01	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.01	0.01	0.00	0.00
Zirconium	mg/L	0.0001	0.0001	0.0001	0.00064	0.00058	9.84	0.00
% Exceedance*							0%	0%

Footnotes:

RPD = Relative Percent Difference; MDL: Method Detection Limit

All value "<DL" have been replaced by "DL".

* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.

Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.

Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.

Italic values correspond to a RPD higher than 20% and for which one of the result is within 10X the MDL and the other one exceeds 10x the MDL.

MEL-25	MEL-25	MEL-25	Sample date	Annual Average					5/16/2022	7/3/2022	9/10/2022
Parameter	MAX GRAB	MAX MEAN	Unit	2018	2019	2020	2021	2022	C2D8668	C2I9359	C2Q7595
Field Measured											
Temperature			°C	-	17.88	4.60	6.68	11.8	8.5	18.2	8.6
pH	6 - 9.5	6 - 9.5	pH units	-	7.89	7.97	8.05	7.37	5.99	8.19	7.92
Conductivity			uS/cm	-	257.95	265.65	186.48	347.3	124.4	312.6	604.9
Dissolved oxygen			mg/L	-	11.15	12.77	10.09	9.31	8.7	8.4	10.83
Dissolved oxygen			%	-	94.30	104.20	92.37	86.3	74.3	91.5	93
Conventional Parameters											
pH	6 - 9.5	6 - 9.5	pH units	8.13	7.90	7.82	7.93	8.03	7.73	8.25	8.1
TSS	30	15	mg/L	33.57	2.50	4.50	1.25	2	3	1	< 1
Major Ions											
Nutrients and Chlorophyll a											
Ammonia Nitrogen (as N)			mg/L	7.02	0.12	0.43	0.04	0.025	< 0.050	< 0.050	< 0.050
General Organics											
Total oil and grease	5	5	mg/L	0.60	0.85	0.70	0.25	0.25	< 0.50	< 0.50	< 0.50
Total Metals											
Arsenic			mg/L	0.00100	0.00072	0.00195	0.00086	0.00142	0.00119	0.00186	0.0012
Copper			mg/L	0.00969	0.00297	0.00314	0.00183	0.00246	0.00382	0.0012	0.00235
Lead	0.1	0.1	mg/L	0.00084	0.00023	0.00049	0.00010	0.00019	0.00037	< 0.00020	< 0.00020
Nickel			mg/L	0.01137	0.00390	0.00405	0.00273	0.0033	0.0041	0.002	0.0038
Volatile Organics											
Benzene	0.37	0.37	mg/L	0.00020	0.00020	0.00020	0.00010	0.00010	< 0.00020	< 0.00020	< 0.00020
Ethylbenzene	0.09	0.09	mg/L	0.00023	0.00020	0.00020	0.00010	0.00010	< 0.00020	< 0.00020	< 0.00020
Toluene	0.002	0.002	mg/L	0.00035	0.00020	0.00020	0.00013	0.00015	< 0.00020	< 0.00020	0.00025
Xylenes			mg/L	0.00031	0.00040	0.00040	0.00020	0.00020	< 0.00040	< 0.00040	< 0.00040
F1 (C6-C10)			mg/L	0.02500	0.02500	0.02500	0.01250	0.013	< 0.025	< 0.025	< 0.025
F2 (C10-C16)			mg/L	0.10000	0.10000	0.10000	0.05000	0.05	< 0.1	< 0.1	< 0.1
F3 (C16-C34)			mg/L	0.20000	0.20000	0.20000	0.10000	0.1	< 0.2	< 0.2	< 0.2
F4 (C34-C50)			mg/L	0.20000	0.20000	0.20000	0.10000	0.1	< 0.2	< 0.2	< 0.2

MEL-SR1	MEL-SR MAX	MEL-SR MAX	Sample date	Annual Average	5/10/2022	5/14/2022	6/10/2022	7/15/2022	8/5/2022	9/7/2022	9/13/2022	10/8/2022
Parameter	GRAB	MEAN	Unit	2022	C2D2671	C2D7520	C2G6545	C2K5864	C2M6661	C2Q2121	C2Q8628	C2T7525
Field Measured												
Temperature			°C	7.3	0.3	4.3	9.9	10.8	15.1	8	9.5	0.2
pH	6.0 - 9.5	6.0 - 9.5	pH units	7.49	7.96	6.81	7.6	7.87	7.38	7.32	7.92	7.03
Conductivity			uS/cm	756.9	257	294.8	329	812	1228	146	1194	1794
Dissolved oxygen			mg/L	28.35	-	17.2	-	11.21	-	88.4	10.7	14.24
Dissolved oxygen			%	95.44	127.6	145.3	-	101.4	89.6	10.41	95.1	98.7
Turbidity			NTU	15.66	79	14.6	2.01	5.98	-	5.99	1.16	0.88
Conventional Parameters												
pH	6.0 - 9.5	6.0 - 9.5	pH units	7.98	7.33	7.68	8.12	8.07	8.19	8.11	8.19	8.11
Turbidity			NTU	4.5	29	1.7	0.2	2.3	0.6	1.4	0.6	0.3
Hardness, as CaCO3			mg/L	294.1	78.5	89.1	186	289	388	412	356	554
Total alkalinity, as CaCO3			mg/L	157	59	69	120	140	230	200	210	230
TDS			mg/L	531	160	125	340	465	700	800	680	980
TDS, calculated			mg/L	515	140	140	300	460	680	770	640	990
TSS	100	50	mg/L	5	14	8	1	4	1	6	1	1
Major Ions												
Chloride			mg/L	136	34	29	74	110	170	220	140	310
Cyanide			mg/L	0.00082	0.00083	0.00119	< 0.00050	0.00087	0.0013	0.00085	< 0.00050	0.001
Fluoride			mg/L	0.11	< 0.10	< 0.10	0.11	0.12	0.14	0.16	0.14	0.14
Silica			mg/L	3.01	1.1	1.1	0.69	3.3	4.5	4.7	4.1	4.6
Sulfate			mg/L	108	17	22	52	120	130	170	140	210
Nutrients and Chlorophyll a												
Ammonia Nitrogen (as N)			mg/L	0.146	0.86	0.12	< 0.050	< 0.050	0.06	< 0.050	< 0.050	< 0.050
Nitrate (as N)			mg/L	0.13	0.13	< 0.10	< 0.10	< 0.10	0.12	0.22	< 0.10	0.34
Nitrite (as N)			mg/L	0.006	0.016	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total phosphorus			mg/L	0.023	0.075	0.042	0.0019	< 0.020	0.023	< 0.020	< 0.020	< 0.020
Orthophosphate (P)			mg/L	0.005	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
General Organics												
Total oil and grease			mg/L	0.67	1.2	< 0.50	< 0.50	< 0.50	0.7	< 0.50	< 0.50	2.2
Total Metals												
Aluminum			mg/L	0.2087	1.16	0.155	0.0169	0.139	0.0221	0.147	0.0226	0.0067
Arsenic			mg/L	0.00271	0.00361	0.00149	0.00131	0.00294	0.00334	0.003	0.00299	0.00299
Barium			mg/L	0.0452	0.0313	0.0198	0.0303	0.0468	0.0601	0.0606	0.0474	0.0653
Cadmium			mg/L	0.000015	0.000037	0.000021	< 0.000010	0.000015	0.000012	< 0.000010	< 0.000010	0.000016
Chromium			mg/L	0.0013	0.0065	< 0.0010	< 0.0010	< 0.0010	< 0.0010	0.001	< 0.0010	< 0.0010
Copper			mg/L	0.00644	0.0133	0.0169	0.00261	0.0052	0.00361	0.00337	0.00349	0.00306
Iron			mg/L	0.373	1.81	0.274	0.037	0.344	0.101	0.308	0.067	0.039
Lead			mg/L	0.00035	0.00134	0.00069	< 0.00020	0.00024	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Manganese			mg/L	0.0544	0.138	0.148	0.0076	0.0291	0.0441	0.0347	0.0165	0.0169
Mercury			mg/L	0.000005	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum			mg/L	0.0011	0.0013	0.0012	0.001	0.0016	0.001	< 0.0010	0.0012	0.0011
Nickel			mg/L	0.0117	0.0071	0.0033	0.0062	0.0063	0.0145	0.0153	0.0132	0.0277
Selenium			mg/L	0.00008	0.00012	< 0.00010	< 0.00010	0.00011	< 0.00010	0.0001	< 0.00010	0.0001
Silver			mg/L	0.000010	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020
Thallium			mg/L	0.000012	0.000023	< 0.000010	< 0.000010	0.000015	0.000014	0.000013	< 0.000010	0.000012
Zinc			mg/L	0.0335	0.0246	0.0241	0.0257	0.0137	0.0721	0.0294	0.0226	0.0555
Dissolved Metals												
Calcium (Dissolved)			mg/L	89.8	22.7	29.8	60.7	81.3	121	133	119	151
Magnesium (Dissolved)			mg/L	16.43	4.14	4.14	9.35	13.3	21.5	24.7	20.8	33.5
Potassium (Dissolved)			mg/L	8.95	7.05	4.06	5.54	7.34	10.5	12.4	10.9	13.8
Sodium (Dissolved)			mg/L	63.1	16.3	14	28.8	48.5	86.9	94.9	75.2	140

QAQC MEL-SR1	Sample Date		8/5/2022						9/7/2022			10/8/2022		
Parameter	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Duplicate	Original	RPD (FD/N)	Duplicate	Original	RPD (FD/N)
Conventional Parameters														
pH	pH units		5.64	-	8.2	8.19	0.12	-	8.09	8.11	0.25	8.13	8.11	0.25
Turbidity	NTU	0.1	0.1	0.1	0.6	0.6	0.00	0.00	1.4	1.4	0.00	0.3	0.3	0.00
Hardness, as CaCO3	mg/L	0.5	0.5	-	374	388	3.67	-	427	412	3.58	520	554	6.33
Hardness, as CaCO3 (dissolved)	mg/L	0.5	0.5	-	393	391	0.51	-	440	435	1.14	509	515	1.17
Total alkalinity, as CaCO3	mg/L	1	1	1	220	230	4.44	0.00	200	200	0.00	230	230	0.00
TDS	mg/L	10	10	10	740	700	5.56	0.00	805	800	0.62	1070	980	8.78
TDS, calculated	mg/L	1	1	-	680	680	0.00	-	770	770	0.00	990	990	0.00
TSS	mg/L	1	1	1	2	1	66.67	0.00	7	6	15.38	1	1	0.00
Major Ions														
Chloride	mg/L	1	1	1	170	170	0.00	0.00	220	220	0.00	310	310	0.00
Cyanide	mg/L	0.0005	0.00058	0.0005	0.0005	0.0013	88.89	14.81	0.001	0.00085	16.22	0.00081	0.001	20.99
Fluoride	mg/L	0.1	0.1	0.1	0.14	0.14	0.00	0.00	0.13	0.16	20.69	0.14	0.14	0.00
Silica	mg/L	0.05	0.05	0.05	4.7	4.5	4.35	0.00	4.7	4.7	0.00	4.7	4.6	2.15
Sulfate	mg/L	0.5	0.5	0.5	130	130	0.00	0.00	170	170	0.00	210	210	0.00
Nutrients and Chlorophyll a														
Ammonia Nitrogen (as N)	mg/L	0.05	0.05	0.05	0.064	0.06	6.45	0.00	0.05	0.05	0.00	0.05	0.05	0.00
Nitrate (as N)	mg/L	0.1	0.1	0.1	0.11	0.12	8.70	0.00	0.23	0.22	4.44	0.35	0.34	2.90
Nitrite (as N)	mg/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
Nitrate + nitrite (as N)	mg/L	0.1	0.1	-	0.11	0.12	8.70	0.1	0.23	0.22	4.44	0.35	0.34	2.90
Total phosphorus	mg/L	0.02	0.02	0.02	0.02	0.023	13.95	0.00	0.02	0.02	0.00	0.02	0.02	0.00
Orthophosphate (P)	mg/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
General Organics														
Total oil and grease	mg/L	0.5	0.7	0.5	0.8	0.7	13.33	33.33	0.5	0.5	0.00	2.3	2.2	4.44
Total Metals														
Aluminum	mg/L	0.003	0.003	0.003	0.0197	0.0221	11.48	0.00	0.108	0.147	30.59	0.0075	0.0067	11.27
Antimony	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00	0.0005	0.0005	0.00	0.0005	0.0005	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.00337	0.00334	0.89	0.00	0.00286	0.003	4.78	0.00284	0.00299	5.15
Barium	mg/L	0.001	0.001	0.001	0.0596	0.0601	0.84	0.00	0.0603	0.0606	0.50	0.0623	0.0653	4.70
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.00	0.0001	0.0001	0.00
Bismuth	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.00	0.001	0.001	0.00
Boron	mg/L	0.05	0.05	0.05	0.08	0.083	3.68	0.00	0.087	0.082	5.92	0.094	0.097	3.14
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.000012	18.18	0.00	0.000012	0.00001	18.18	0.000016	0.000016	0.00
Calcium (total)	mg/L	0.05	0.05	-	114	120	5.13	-	130	124	4.72	153	164	6.94
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.00	0.001	0.001	0.00
Cobalt	mg/L	0.0002	0.0002	0.0002	0.0006	0.00057	5.13	0.00	0.00063	0.00068	7.63	0.00039	0.00041	5.00
Copper	mg/L	0.0005	0.0005	0.0005	0.00368	0.00361	1.92	0.00	0.00329	0.00337	2.40	0.00293	0.00306	4.34
Iron	mg/L	0.01	0.01	0.01	0.127	0.101	22.81	0.00	0.228	0.308	29.85	0.037	0.039	5.26
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.00	0.0002	0.0002	0.00
Lithium	mg/L	0.002	0.002	0.002	0.0174	0.0179	2.83	0.00	0.0247	0.0233	5.83	0.0139	0.0143	2.84
Magnesium (total)	mg/L	0.05	0.05	-	21.9	21.5	1.84	-	25.1	24.9	0.80	33.6	35	4.08
Manganese	mg/L	0.001	0.001	0.001	0.0471	0.0441	6.58	0.00	0.0328	0.0347	5.63	0.0162	0.0169	4.23
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00	0.00001	0.00001	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.0011	0.001	9.52	0.00	0.001	0.001	0.00	0.001	0.0011	9.52
Nickel	mg/L	0.001	0.001	0.001	0.0157	0.0145	7.95	0.00	0.0154	0.0153	0.65	0.0262	0.0277	5.57
Potassium (total)	mg/L	0.05	0.05	-	10.3	10.4	0.97	-	12.3	12.2	0.82	13.5	14	3.64
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.00011	0.0001	9.52	0.00011	0.0001	9.52
Silicon	mg/L	0.1	0.1	0.1	2.09	2.22	6.03	0.00	2.28	2.28	0.00	2.16	2.29	5.84
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00	0.00002	0.00002	0.00	0.00002	0.00002	0.00
Sodium (total)	mg/L	0.05	0.05	-	88.3	87.4	1.02	-	95.7	94.9	0.84	150	154	2.63
Strontium	mg/L	0.001	0.001	0.001	0.66	0.67	1.50	0.00	0.849	0.841	0.95	0.816	0.845	3.49
Sulphur	mg/L	3	3	-	42.2	41.8	0.95	-	54	53.6	0.74	68.4	73.2	6.78
Thallium	mg/L	0.00001	0.00001	0.00001	0.000014	0.000014	0.00	0.00	0.000013	0.000013	0.00	0.000012	0.000012	0.00
Tin	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.00	0.005	0.005	0.00
Titanium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.0052	0.0061	15.93	0.005	0.005	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.00188	0.00192	2.11	0.00	0.00226	0.00219	3.15	0.00272	0.00292	7.09
Vanadium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.00	0.005	0.005	0.00
Zinc	mg/L	0.005	0.005	0.005	0.0704	0.0721	2.39	0.00	0.028	0.0294	4.88	0.0544	0.0555	2.00
Zirconium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.00011	9.52	0.0001	0.0001	0.00
Dissolved Metals														
Aluminum	mg/L	0.003	0.003	0.003	0.0065	0.0054	18.49	0.00	0.0063	0.0107	51.76	0.003	0.003	0.00
Antimony	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00	0.0005	0.0005	0.00	0.0005	0.0005	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.00303	0.00301	0.66	0.00	0.00263	0.00269	2.26	0.00265	0.00259	2.29

QAQC MEL-SR1 Parameter	Sample Date		8/5/2022						9/7/2022			10/8/2022		
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Duplicate	Original	RPD (FD/N)	Duplicate	Original	RPD (FD/N)
Barium	mg/L	0.001	0.001	0.001	0.0604	0.062	2.61	0.00	0.0617	0.0604	2.13	0.0637	0.0631	0.95
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.00	0.0001	0.0001	0.00
Bismuth	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.00	0.001	0.001	0.00
Boron	mg/L	0.05	0.05	0.05	0.078	0.075	3.92	0.00	0.11	0.103	6.57	0.097	0.101	4.04
Cadmium	mg/L	0.00001	0.00001	0.00001	0.000011	0.00001	9.52	0.00	0.00001	0.00001	0.00	0.000016	0.000016	0.00
Calcium (Dissolved)	mg/L	0.05	0.05	-	122	121	0.82	-	135	133	1.49	148	151	2.01
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.00	0.001	0.001	0.00
Cobalt	mg/L	0.0002	0.0002	0.0002	0.0007	0.00073	4.20	0.00	0.00049	0.00048	2.06	0.00041	0.00041	0.00
Copper	mg/L	0.0002	0.0002	0.0002	0.00341	0.00342	0.29	0.00	0.00265	0.00283	6.57	0.00268	0.00282	5.09
Iron	mg/L	0.005	0.005	0.005	0.0259	0.02	25.71	0.00	0.0133	0.0216	47.56	0.0105	0.0099	5.88
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.00	0.0002	0.0002	0.00
Lithium	mg/L	0.002	0.002	0.002	0.0177	0.0171	3.45	0.00	0.0274	0.0267	2.59	0.014	0.0141	0.71
Magnesium (Dissolved)	mg/L	0.05	0.05	-	21.4	21.5	0.47	-	25.2	24.7	2.00	33.7	33.5	0.60
Manganese	mg/L	0.001	0.001	0.001	0.0485	0.0461	5.07	0.00	0.0295	0.0302	2.35	0.0155	0.0158	1.92
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.0011	9.52	0.00	0.001	0.001	0.00	0.001	0.001	0.00
Nickel	mg/L	0.001	0.001	0.001	0.0152	0.0142	6.80	0.00	0.0154	0.0153	0.65	0.0278	0.028	0.72
Potassium (Dissolved)	mg/L	0.05	0.05	-	10.6	10.5	0.95	-	12.6	12.4	1.60	13.8	13.8	0.00
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.00011	9.52	0.0001	0.00011	9.52
Silicon	mg/L	0.1	0.1	0.1	2.09	2.04	2.42	0.00	2.02	1.96	3.02	2.2	2.25	2.25
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00	0.00002	0.00002	0.00	0.00002	0.00002	0.00
Sodium (Dissolved)	mg/L	0.05	0.05	-	86.7	86.9	0.23	-	94.6	94.9	0.32	140	140	0.00
Strontium	mg/L	0.001	0.001	0.001	0.703	0.699	0.57	0.00	0.897	0.9	0.33	0.774	0.757	2.22
Sulphur	mg/L	3	3	-	43.1	42.2	2.11	-	57	55.8	2.13	70.8	70.8	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.000014	0.000014	0.00	0.00	0.000011	0.000012	8.70	0.00001	0.00001	0.00
Tin	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.00	0.005	0.005	0.00
Titanium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.00	0.005	0.005	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.00206	0.00206	0.00	0.00	0.00217	0.00221	1.83	0.00295	0.00296	0.34
Vanadium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.00	0.005	0.005	0.00
Zinc	mg/L	0.005	0.005	0.005	0.0647	0.065	0.46	0.00	0.0251	0.0304	19.10	0.0566	0.0565	0.18
Zirconium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.00	0.0001	0.00011	9.52
% Exceedance*							1%	0%			2%			0%

Footnotes:

RPD = Relative Percent Difference; MDL: Method Detection Limit

All value "<DL" have been replaced by "DL".

* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.

Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.

Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.

Italic values correspond to a RPD higher than 20% and for which one of the result is within 10X the MDL and the other one exceeds 10x the MDL.

MEL-SR11	MEL-SR MAX	MEL-SR MAX	Sample date	Annual Average	5/10/2022	9/7/2022
Parameter	GRAB	MEAN	Unit	2022	C2D2671	C2Q2121
Field Measured						
Temperature			°C	6.1	3.3	8.8
pH	6.0 - 9.5	6.0 - 9.5	pH units	8.06	8.24	7.87
Conductivity			uS/cm	962.9	104.8	1821
Dissolved oxygen			mg/L	54.0	17.8	90.1
Dissolved oxygen			%	72.5	134.5	10.4
Turbidity			NTU	18.01	33.5	2.52
Conventional Parameters						
pH	6.0 - 9.5	6.0 - 9.5	pH units	7.79	7.5	8.08
Turbidity			NTU	1.1	1.9	0.3
Hardness, as CaCO3			mg/L	207.9	31.8	384
Total alkalinity, as CaCO3			mg/L	103	26	180
TDS, calculated			mg/L	515	59	970
TSS	100	50	mg/L	3	3	2
Major Ions						
Chloride			mg/L	155	20	290
Cyanide			mg/L	0.00071	< 0.00050	0.00116
Fluoride			mg/L	0.16	< 0.10	0.27
Silica			mg/L	1.97	0.33	3.6
Sulfate			mg/L	120.9	1.7	240
Nutrients and Chlorophyll a						
Ammonia Nitrogen (as N)			mg/L	0.043	0.06	< 0.050
Nitrate (as N)			mg/L	1.06	0.16	1.96
Nitrite (as N)			mg/L	0.005	< 0.010	< 0.010
Total phosphorus			mg/L	0.027	0.044	< 0.020
Orthophosphate (P)			mg/L	0.005	< 0.010	< 0.010
General Organics						
Total oil and grease			mg/L	1.38	2.5	< 0.50
Total Metals						
Aluminum			mg/L	0.0948	0.181	0.0086
Arsenic			mg/L	0.00188	0.00238	0.00137
Barium			mg/L	0.0246	0.01	0.0391
Cadmium			mg/L	0.000014	0.000016	0.000011
Chromium			mg/L	0.0009	0.0013	< 0.0010

MEL-SR11	MEL-SR MAX	MEL-SR MAX	Sample date	Annual Average	5/10/2022	9/7/2022
Parameter	GRAB	MEAN	Unit	2022	C2D2671	C2Q2121
Copper			mg/L	0.00272	0.00271	0.00272
Iron			mg/L	0.184	0.341	0.027
Lead			mg/L	0.00028	0.00046	< 0.00020
Manganese			mg/L	0.0084	0.0154	0.0014
Mercury			mg/L	0.000005	< 0.00001	< 0.00001
Molybdenum			mg/L	0.0034	< 0.0010	0.0062
Nickel			mg/L	0.0026	< 0.0010	0.0046
Selenium			mg/L	0.00012	< 0.00010	0.00018
Silver			mg/L	0.000010	< 0.000020	< 0.000020
Thallium			mg/L	0.000010	< 0.000010	0.000015
Zinc			mg/L	0.0053	0.0081	< 0.0050
Dissolved Metals						
Calcium (Dissolved)			mg/L	55.76	9.51	102
Magnesium (Dissolved)			mg/L	19.27	1.94	36.6
Potassium (Dissolved)			mg/L	9.37	1.83	16.9
Sodium (Dissolved)			mg/L	94.14	8.28	180

MEL-SR13	MEL-SR MAX	MEL-SR MAX	Sample date	Annual Average	6/10/2022
Parameter	GRAB	MEAN	Unit	2022	C2G6545
Field Measured					
Temperature			°C	9.5	9.5
pH	6.0 - 9.5	6.0 - 9.5	pH units	8.02	8.02
Conductivity			uS/cm	59.5	59.5
Dissolved oxygen			mg/L	-	-
Dissolved oxygen			%	-	-
Turbidity			NTU	12.8	12.8
Conventional Parameters					
pH	6.0 - 9.5	6.0 - 9.5	pH units	7.55	7.55
Turbidity			NTU	3.8	3.8
Hardness, as CaCO3			mg/L	22.5	22.5
Total alkalinity, as CaCO3			mg/L	25	25
TDS, calculated			mg/L	83	83
TSS	100	50	mg/L	12	12
Major Ions					
Chloride			mg/L	4.7	4.7
Cyanide			mg/L	0.00025	< 0.00050
Fluoride			mg/L	0.05	< 0.10
Silica			mg/L	0.69	0.69
Sulfate			mg/L	51	51
Nutrients and Chlorophyll a					
Ammonia Nitrogen (as N)			mg/L	0.025	< 0.050
Nitrate (as N)			mg/L	0.05	< 0.10
Nitrite (as N)			mg/L	0.005	< 0.010
Total phosphorus			mg/L	0.011	0.011
Orthophosphate (P)			mg/L	0.005	< 0.010
General Organics					
Total oil and grease			mg/L	0.25	< 0.50
Total Metals					
Aluminum			mg/L	0.195	0.195
Arsenic			mg/L	0.00235	0.00235
Barium			mg/L	0.0071	0.0071

MEL-SR13	MEL-SR MAX	MEL-SR MAX	Sample date	Annual Average	6/10/2022
Parameter	GRAB	MEAN	Unit	2022	C2G6545
Cadmium			mg/L	0.000005	< 0.000010
Chromium			mg/L	0.0016	0.0016
Copper			mg/L	0.00307	0.00307
Iron			mg/L	0.474	0.474
Lead			mg/L	0.00069	0.00069
Manganese			mg/L	0.0164	0.0164
Mercury			mg/L	0.000005	< 0.00001
Molybdenum			mg/L	0.0005	< 0.0010
Nickel			mg/L	0.0018	0.0018
Selenium			mg/L	0.00005	< 0.00010
Silver			mg/L	0.000010	< 0.000020
Thallium			mg/L	0.000005	< 0.000010
Zinc			mg/L	0.0084	0.0084
Dissolved Metals					
Calcium (Dissolved)			mg/L	7.06	7.06
Magnesium (Dissolved)			mg/L	1.07	1.07
Potassium (Dissolved)			mg/L	0.890	0.89
Sodium (Dissolved)			mg/L	3.36	3.36

MEL-SR16	MEL-SR MAX	MEL-SR MAX	Sample date	Annual Average	5/8/2022
Parameter	GRAB	MEAN	Unit	2022	C2D2671
Field Measured					
Temperature			°C	5.9	5.9
pH	6.0 - 9.5	6.0 - 9.5	pH units	7.7	7.7
Conductivity			uS/cm	267.8	267.8
Dissolved oxygen			mg/L	-	-
Dissolved oxygen			%	93.2	93.2
Turbidity			NTU	-	-
Conventional Parameters					
pH	6.0 - 9.5	6.0 - 9.5	pH units	7.25	7.25
Turbidity			NTU	35	35
Hardness, as CaCO3			mg/L	127	127
Total alkalinity, as CaCO3			mg/L	69	69
TDS, calculated			mg/L	220	220
TSS	100	50	mg/L	110	110
Major Ions					
Chloride			mg/L	68	68
Cyanide			mg/L	0.00136	0.00136
Fluoride			mg/L	0.05	< 0.10
Silica			mg/L	1.6	1.6
Sulfate			mg/L	28	28
Nutrients and Chlorophyll a					
Ammonia Nitrogen (as N)			mg/L	0.48	0.48
Nitrate (as N)			mg/L	0.75	0.75
Nitrite (as N)			mg/L	0.030	0.03
Total phosphorus			mg/L	0.30	0.3
Orthophosphate (P)			mg/L	0.090	0.09
General Organics					
Total oil and grease			mg/L	2.6	2.6
Total Metals					
Aluminum			mg/L	1.78	1.78
Arsenic			mg/L	0.0322	0.0322
Barium			mg/L	0.0533	0.0533

MEL-SR16	MEL-SR MAX	MEL-SR MAX	Sample date	Annual Average	5/8/2022
Parameter	GRAB	MEAN	Unit	2022	C2D2671
Cadmium			mg/L	0.000042	0.000042
Chromium			mg/L	0.0047	0.0047
Copper			mg/L	0.0109	0.0109
Iron			mg/L	4.30	4.3
Lead			mg/L	0.00900	0.009
Manganese			mg/L	0.216	0.216
Mercury			mg/L	0.00001	< 0.00001
Molybdenum			mg/L	0.0018	0.0018
Nickel			mg/L	0.0077	0.0077
Selenium			mg/L	0.00014	0.00014
Silver			mg/L	0.000010	< 0.000020
Thallium			mg/L	0.000039	0.000039
Zinc			mg/L	0.0133	0.0133
Dissolved Metals					
Calcium (Dissolved)			mg/L	40.9	40.9
Magnesium (Dissolved)			mg/L	5.96	5.96
Potassium (Dissolved)			mg/L	18.2	18.2
Sodium (Dissolved)			mg/L	17.3	17.3
Strontium			mg/L	0.372	0.372