



Meliadine Gold Project
NWB 2AM-MEL1631
September 2020 Monthly Report

Prepared for:

Nunavut Water Board

Prepared by:

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October 30th, 2020

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SECTION 1 • BACKGROUND

As required under Part I, Item 10 of Type A Water License 2AM-MEL1631, this report documents the water management and monitoring activities at the mine site and provides a summary of spills/actions for the month of September 2020.

SECTION 2 • WATER MANAGEMENT

2.1 WATER USAGE

Table 2.1 details monthly water usage approved under Water License 2AM-MEL1631:

Table 2.1: Summary of Agnico's monthly water usage in September 2020

	Monthly Usage (m ³)
Camp and Mill (MEL-11)	6,217.48
Construction – Batch Plant (MEL-26 – A8)	0
Dust suppression	0
Total September	6,217.48
Year to date 2020	232,113.85

2.2 DEWATERING ACTIVITIES

Dewatering of the Lake H-19 and H-20 started August 17th 2019 and stopped October 5th 2019.

2.3 MELIADINE DISCHARGE

Discharge from the EWTP into Meliadine Lake via the Final Discharge Point (MEL-14) started June 5th 2020, a total of 214,846 m³ was discharged throughout September 2020.

2.4 MELVIN BAY DISCHARGE

Discharge to sea via the Final Discharge Point (MEL-26) started August 10th 2020, a total of approximately 8,416 m³ was discharged throughout the September 2020.

2.5 SEEPAGE AND RUNOFF FROM THE LANDFILL AND LANDFARM

The 2AM-MEL1631 landfill and landfarm were commissioned in November 2017. No seepage or runoff was observed in September 2020.

2.6 SEWAGE TREATMENT PLANT

In September 2020, 4,597 m³ of treated wastewater was discharged into CP1. The majority of the sludge is disposed of in the WRSF.

2.7 CONTAINMENTS

Discharged from the Itivia fuel containment facility (Station Mel-25) started June 27th and ended in July. Approximately 3,780 m³ was discharged through the discharge period.

2.8 MONITORING ANALYTICAL DATA

In September 2020, samples related to the Water Licence were taken. See below the analytical results from these monitoring stations. One TSS exceedance occurred in September 2020 at MEL-26.

MEL-11 Sample date		9/8/2020
Parameter	Unit	
WQ02- Conventional Parameters		
Dissolved organic carbon	mg/L	2.9
Hardness, as CaCO ₃ (D)	mg/L	25.1
Hardness, as CaCO ₃ (T)	mg/L	26.3
pH (T)	pH units	7.46
Specific conductivity	umhos/cm	93
Total alkalinity, as CaCO ₃	mg/L	17
Total dissolved solids	mg/L	75
Total organic carbon	mg/L	2.9
Total suspended solids	mg/L	2
Turbidity	NTU	0.3
WQ03- Major Ions		
Bicarbonate, as CaCO ₃	mg/L	17
Calcium	mg/L	7.78
Carbonate, as CaCO ₃	mg/L	< 1.0
Chloride	mg/L	12
Cyanide	mg/L	< 0.0050
Cyanide (free)	mg/L	0.0012
Cyanide (WAD)	mg/L	< 0.0010
Magnesium	mg/L	1.37
Potassium	mg/L	0.936
Silica	mg/L	0.29
Sodium	mg/L	5.71
Sulphate	mg/L	4
WQ04- Nutrients and Chlorophyll a		
Nitrate	mg/L	< 0.10
Nitrate + nitrite	mg/L	< 0.10
Nitrite	mg/L	< 0.010
Orthophosphate	mg/L	< 0.010
Total ammonia	mg/L	0.17
Total Kjeldahl nitrogen	mg/L	0.2
Total phosphorus	mg/L	< 0.020
WQ06- Total Metals		
Aluminum	mg/L	0.008
Antimony	mg/L	< 0.0005
Arsenic	mg/L	0.0005
Barium	mg/L	0.0078
Beryllium	mg/L	< 0.0001
Bismuth	mg/L	< 0.001
Boron	mg/L	< 0.05
Cadmium	mg/L	< 0.00001

Calcium	mg/L	8.12
Chromium	mg/L	< 0.001
Cobalt	mg/L	< 0.0002
Copper	mg/L	0.00085
Iron	mg/L	0.035
Lead	mg/L	< 0.0002
Lithium	mg/L	< 0.002
Magnesium	mg/L	1.45
Manganese	mg/L	0.0045
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.001
Nickel	mg/L	< 0.001
Potassium	mg/L	1.03
Selenium	mg/L	< 0.0001
Silicon	mg/L	0.149
Silver	mg/L	< 0.00002
Sodium	mg/L	5.89
Strontium	mg/L	0.0448
Sulphur	mg/L	< 3
Thallium	mg/L	< 0.00001
Tin	mg/L	< 0.005
Titanium	mg/L	< 0.005
Uranium	mg/L	< 0.0001
Vanadium	mg/L	< 0.005
Zinc	mg/L	< 0.005
Zirconium	mg/L	< 0.0001
WQ07- Dissolved Metals		
Aluminum	mg/L	< 0.003
Antimony	mg/L	< 0.0005
Arsenic	mg/L	0.0004
Barium	mg/L	0.0078
Beryllium	mg/L	< 0.0001
Bismuth	mg/L	< 0.001
Boron	mg/L	< 0.05
Cadmium	mg/L	< 0.00001
Chromium	mg/L	< 0.001
Cobalt	mg/L	< 0.0002
Copper	mg/L	0.00077
Iron	mg/L	0.0101
Lead	mg/L	< 0.0002
Lithium	mg/L	< 0.002
Manganese	mg/L	< 0.001
Mercury	mg/L	< 0.00001

Molybdenum	mg/L	< 0.001
Nickel	mg/L	< 0.001
Selenium	mg/L	< 0.0001
Silicon	mg/L	0.128
Silver	mg/L	< 0.00002
Strontium	mg/L	0.0446
Sulphur	mg/L	< 3.0
Thallium	mg/L	< 0.00001
Tin	mg/L	< 0.005
Titanium	mg/L	< 0.005
Uranium	mg/L	< 0.0001
Vanadium	mg/L	< 0.005
Zinc	mg/L	< 0.005
Zirconium	mg/L	< 0.0001
WQ10- Volatile Organics		
Benzene	ug/L	< 0.20
Ethylbenzene	ug/L	< 0.20
F1 (C6-C10)	ug/L	< 25
F1 (C6-C10)-BTEX	ug/L	< 25
F2 (C10-C16)	ug/L	< 100
F3 (C16-C34)	ug/L	< 200
F4 (C34-C50)	ug/L	< 200
m,p-Xylenes	ug/L	< 0.40
o-Xylene	ug/L	< 0.20
Reached baseline at C50	ug/L	1
Toluene	ug/L	< 0.20
Xylenes	ug/L	< 0.40

MEL-12 Sample date		9/7/2020
Parameter	Unit	
WQ02- Conventional Parameters		
Hardness, as CaCO ₃ (D)	mg/L	741
Hardness, as CaCO ₃ (T)	mg/L	746
pH (T)	pH units	7.76
Specific conductivity	umhos/cm	3200
Total alkalinity, as CaCO ₃	mg/L	82
Total dissolved solids	mg/L	1880
Total organic carbon	mg/L	12
Total suspended solids	mg/L	4
Turbidity	NTU	0.6
WQ03- Major Ions		
Calcium	mg/L	211
Chloride	mg/L	790
Cyanide	mg/L	< 0.0050
Fluoride	mg/L	< 0.10
Magnesium	mg/L	51.7
Potassium	mg/L	23.2
Sodium	mg/L	329
Sulphate	mg/L	210
WQ04- Nutrients and Chlorophyll a		
Nitrate	mg/L	12
Nitrate + nitrite	mg/L	12.4
Nitrite	mg/L	0.411
Orthophosphate	mg/L	< 0.010
Total ammonia	mg/L	1.5
Total phosphorus	mg/L	0.066
WQ06- Total Metals		
Aluminum	mg/L	0.172
Antimony	mg/L	0.00073
Arsenic	mg/L	0.0071
Barium	mg/L	0.109
Beryllium	mg/L	< 0.0001
Bismuth	mg/L	< 0.001
Boron	mg/L	0.396
Cadmium	mg/L	0.000015
Calcium	mg/L	213
Chromium	mg/L	< 0.001
Cobalt	mg/L	0.00137
Copper	mg/L	0.0017
Iron	mg/L	0.111

Lead	mg/L	0.00029
Lithium	mg/L	0.077
Magnesium	mg/L	52
Manganese	mg/L	0.258
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	0.0044
Nickel	mg/L	0.0059
Potassium	mg/L	23.4
Selenium	mg/L	0.0004
Silicon	mg/L	0.995
Silver	mg/L	< 0.00002
Sodium	mg/L	333
Strontium	mg/L	3.77
Sulphur	mg/L	73.7
Thallium	mg/L	0.000031
Tin	mg/L	< 0.005
Titanium	mg/L	< 0.005
Uranium	mg/L	0.00185
Vanadium	mg/L	< 0.005
Zinc	mg/L	0.0093
Zirconium	mg/L	< 0.0001
WQ07- Dissolved Metals		
Aluminum	mg/L	0.12
Antimony	mg/L	0.0007
Arsenic	mg/L	0.00614
Barium	mg/L	0.109
Beryllium	mg/L	< 0.0001
Bismuth	mg/L	< 0.001
Boron	mg/L	0.385
Cadmium	mg/L	0.000014
Chromium	mg/L	< 0.001
Cobalt	mg/L	0.00137
Copper	mg/L	0.00159
Iron	mg/L	0.0608
Lead	mg/L	0.0002
Lithium	mg/L	0.0722
Manganese	mg/L	0.234
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	0.0045
Nickel	mg/L	0.0057
Selenium	mg/L	0.00039
Silicon	mg/L	0.939
Silver	mg/L	< 0.00002

Strontium	mg/L	3.7
Sulphur	mg/L	72.9
Thallium	mg/L	0.000032
Tin	mg/L	< 0.005
Titanium	mg/L	< 0.005
Uranium	mg/L	0.0019
Vanadium	mg/L	< 0.005
Zinc	mg/L	0.0102
Zirconium	mg/L	< 0.0001

MEL-13 Sample date		9/5/2020	9/13/2020	9/20/2020	9/27/2020
Parameter	Unit				
WQ01- Field Measured					
Conductivity	uS/cm	111.3	129.9	-	-
Dissolved oxygen	%	94.2	95.8	-	-
Dissolved oxygen	mg/L	10.41	11.29	-	-
pH	-	7.73	7.59	-	-
Temperature	°C	10.8	8.2	-	-
WQ02- Conventional Parameters					
Dissolved organic carbon	mg/L	3.3	3.2	3.3	3.2
Dissolved Oxygen	mg/L	10.8	10.8	10.6	9.86
Hardness, as CaCO3 (D)	mg/L	29.4	34	34.3	30.8
Hardness, as CaCO3 (T)	mg/L	29.7	34.2	32	30.1
pH (T)	pH units	7.32	7.31	7.44	7.39
Specific conductivity	umhos/cm	110	140	130	120
Total alkalinity, as CaCO3	mg/L	17	17	17	18
Total dissolved solids	mg/L	35	65	80	65
Total organic carbon	mg/L	3.5	3.4	3.4	3.4
Total suspended solids	mg/L	1	1	1	1
Turbidity	NTU	0.4	0.4	0.5	0.3
WQ03- Major Ions					
Bicarbonate, as CaCO3	mg/L	17	17	17	18
Calcium	mg/L	9.03	10.2	10.3	9.31
Carbonate, as CaCO3	mg/L	< 1.0	< 1.0	< 1.0	< 1.0
Chloride	mg/L	17	23	21	18
Cyanide	mg/L	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Cyanide (free)	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Cyanide (WAD)	mg/L	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Magnesium	mg/L	1.65	2.08	2.08	1.83
Potassium	mg/L	1.13	1.3	1.3	1.2
Silica	mg/L	0.3	0.23	0.24	0.19

Sodium	mg/L	7.4	9.83	10.1	8.08
Sulphate	mg/L	4.9	6.8	6.8	5.7
WQ04- Nutrients and Chlorophyll a					
Dissolved phosphorus	mg/L	0.0047	0.0067	0.0051	0.0055
Nitrate	mg/L	< 0.10	0.13	< 0.10	< 0.10
Nitrate + nitrite	mg/L	< 0.10	0.13	< 0.10	< 0.10
Nitrite	mg/L	< 0.010	< 0.010	< 0.010	< 0.010
Orthophosphate	mg/L	< 0.010	< 0.010	0.011	< 0.010
Total ammonia	mg/L	0.21	0.083	< 0.050	< 0.050
Total Kjeldahl nitrogen	mg/L	0.2	0.23	0.3	0.2
Total phosphorus	mg/L	< 0.020	0.021	< 0.020	< 0.020
Total phosphorus	mg/L	0.0135	0.0097	0.0105	0.0106
WQ06- Total Metals					
Aluminum	mg/L	0.00513	0.00827	0.00594	0.00645
Antimony	mg/L	< 0.00002	0.000024	< 0.00002	0.000039
Arsenic	mg/L	0.000507	0.000534	0.000513	0.000526
Barium	mg/L	0.00826	0.00899	0.00897	0.00846
Beryllium	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Bismuth	mg/L	< 0.000005	< 0.000005	< 0.000005	< 0.000005
Boron	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	mg/L	< 0.000005	< 0.000005	< 0.000005	< 0.000005
Calcium	mg/L	9.1	10.4	9.78	9.2
Chromium	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Cobalt	mg/L	0.0000261	0.0000326	0.0000307	0.0000258
Copper	mg/L	0.000927	0.000826	0.000831	0.000812
Iron	mg/L	0.03	0.0246	0.0225	0.0215
Lead	mg/L	0.0000133	0.0000087	0.0000081	0.0000144
Lithium	mg/L	0.00132	0.00164	0.00166	0.00128
Magnesium	mg/L	1.68	2.02	1.84	1.72
Manganese	mg/L	0.00672	0.00729	0.00557	0.00424
Mercury	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001

Molybdenum	mg/L	0.000135	0.000166	0.000114	0.000128
Nickel	mg/L	0.000853	0.00073	0.000696	0.000675
Potassium	mg/L	1.14	1.3	1.2	1.19
Selenium	mg/L	0.000042	0.000044	< 0.00004	0.000054
Silicon	mg/L	0.139	0.143	0.111	0.109
Silver	mg/L	< 0.000005	< 0.000005	< 0.000005	< 0.000005
Sodium	mg/L	0.00747	0.00974	0.00863	0.00792
Strontium	mg/L	0.0588	0.084	0.0741	0.0648
Sulphur	mg/L	< 3.0	< 3.0	< 3.0	< 3.0
Thallium	mg/L	0.0000023	< 0.000002	< 0.000002	< 0.000002
Tin	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Titanium	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Uranium	mg/L	0.0000221	0.00003	0.0000284	0.0000256
Vanadium	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Zinc	mg/L	0.00072	0.00025	< 0.0001	0.00118
Zirconium	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
WQ07- Dissolved Metals					
Aluminum	mg/L	0.00115	0.00723	0.00491	0.00194
Antimony	mg/L	0.000029	0.000027	0.000034	< 0.00002
Arsenic	mg/L	0.000493	0.000542	0.000476	0.000466
Barium	mg/L	0.0081	0.00883	0.00887	0.00818
Beryllium	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Bismuth	mg/L	< 0.000005	< 0.000005	< 0.000005	< 0.000005
Boron	mg/L	< 0.01	< 0.01	0.01	< 0.01
Cadmium	mg/L	< 0.000005	< 0.000005	< 0.000005	< 0.000005
Chromium	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Cobalt	mg/L	0.0000111	0.0000311	0.0000199	0.0000173
Copper	mg/L	0.000779	0.000913	0.000878	0.000785
Iron	mg/L	0.0058	0.0188	0.008	0.0047
Lead	mg/L	< 0.000005	0.0000408	0.000055	< 0.000005
Lithium	mg/L	0.00126	0.00168	0.00161	0.00167

Manganese	mg/L	0.000341	0.0016	0.00126	0.000515
Mercury	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.000123	0.00019	0.000149	0.000126
Nickel	mg/L	0.000634	0.000834	0.00072	0.000659
Selenium	mg/L	< 0.00004	< 0.00004	0.000048	0.000042
Silicon	mg/L	0.119	0.119	0.112	0.094
Silver	mg/L	0.000005	< 0.000005	< 0.000005	< 0.000005
Strontium	mg/L	0.0569	0.0758	0.0752	0.064
Sulphur	mg/L	< 3.0	< 3.0	< 3.0	< 3.0
Thallium	mg/L	< 0.000002	< 0.000002	0.0000027	0.0000026
Tin	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Titanium	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Uranium	mg/L	0.0000176	0.000027	0.000028	0.0000204
Vanadium	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Zinc	mg/L	0.00017	0.00137	0.00062	0.00049
Zirconium	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
WQ08- Radionuclides					
Radium-226	Bq/l	< 0.0050	< 0.0050	< 0.0050	-
WQ10- Volatile Organics					
Benzene	ug/L	< 0.20	< 0.20	< 0.20	< 0.20
Ethylbenzene	ug/L	< 0.20	< 0.20	< 0.20	< 0.20
F1 (C6-C10)	ug/L	< 25	< 25	< 25	< 25
F1 (C6-C10)-BTEX	ug/L	< 25	< 25	< 25	< 25
F2 (C10-C16)	ug/L	< 100	< 100	< 100	< 100
F3 (C16-C34)	ug/L	< 200	< 200	< 200	< 200
F4 (C34-C50)	ug/L	< 200	< 200	< 200	< 200
m,p-Xylenes	ug/L	< 0.40	< 0.40	< 0.40	< 0.40
o-Xylene	ug/L	< 0.20	< 0.20	< 0.20	< 0.20
Reached baseline at C50	ug/L	1	YES	YES	YES
Toluene	ug/L	< 0.20	< 0.20	< 0.20	< 0.20
Xylenes	ug/L	< 0.40	< 0.40	< 0.40	< 0.40

MEL-14 Sample date		9/5/2020	9/6/2020	9/13/2020	9/20/2020	9/27/2020
Parameter	Unit					
WQ01- Field Measured						
Conductivity	uS/cm	3261	3265	-	-	-
Dissolved oxygen	%	98.3	95.9	-	-	-
Dissolved oxygen	mg/L	10.77	10.77	-	-	-
pH	-	7.11	7.21	-	-	-
Temperature	°C	10.8	9.8	-	-	-
WQ02- Conventional Parameters						
Dissolved organic carbon	mg/L	9.1	9.6	7.8	9.2	8.7
Dissolved Oxygen	mg/L	10.8	10.4	10.8	10.6	11
Hardness, as CaCO ₃ (D)	mg/L	685	704	777	810	871
Hardness, as CaCO ₃ (T)	mg/L	683	708	756	781	948
pH (T)	pH units	7.47	7.61	7.44	7.45	7.46
Specific conductivity	umhos/cm	3100	3200	3500	3500	3900
Total alkalinity, as CaCO ₃	mg/L	71	75	66	76	69
Total dissolved solids (maxx_TDSCAL)	mg/L	1700	1700	1900	1900	2100
Total dissolved solids (SM2540C)	mg/L	1940	1910	1780	2410	2300
Total organic carbon	mg/L	9.1	9.8	8.9	10	9.3
Total suspended solids	mg/L	5	6	6	5	5
Turbidity	NTU	0.6	0.6	0.7	0.7	0.6
WQ03- Major Ions						
Bicarbonate, as CaCO ₃	mg/L	71	74	65	76	69
Calcium	mg/L	197	203	224	233	247
Carbonate, as CaCO ₃	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloride	mg/L	800	780	900	920	950
Cyanide	mg/L	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050

Cyanide (free)	mg/L	0.0021	0.0026	0.0033	0.0019	0.0028
Cyanide (WAD)	mg/L	0.0019	0.0013	0.0013	0.0011	0.0012
Fluoride	mg/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Magnesium	mg/L	46.8	47.8	53	55.1	61.4
Potassium	mg/L	21.6	22.4	23.5	24.5	26.3
Silica	mg/L	1.8	2	2	1.9	1.5
Sodium	mg/L	292	296	343	341	382
Sulphate	mg/L	200	210	230	230	260
WQ04- Nutrients and Chlorophyll a						
Biochemical Oxygen Demand, 5 Day	mg/L	< 2	< 2	< 2	< 2	< 2
Nitrate	mg/L	11.2	11.7	14.4	14.9	17.2
Nitrate + nitrite	mg/L	11.5	12.1	14.9	15.3	17.5
Nitrite	mg/L	0.351	0.41	0.448	0.373	0.38
Orthophosphate	mg/L	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total ammonia	mg/L	0.92	0.98	1.8	1.3	1.7
Total Kjeldahl nitrogen	mg/L	1	1.7	3.1	1.2	2.5
Total phosphorus	mg/L	< 0.020	0.022	0.022	< 0.020	< 0.020
WQ06- Total Metals						
Aluminum	mg/L	0.436	0.495	0.998	0.616	0.668
Antimony	mg/L	0.00069	0.00074	0.00071	0.00069	0.00064
Arsenic	mg/L	0.00361	0.0044	0.00385	0.00343	0.00229
Barium	mg/L	0.104	0.112	0.108	0.11	0.109
Beryllium	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Bismuth	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Boron	mg/L	0.343	0.38	0.42	0.386	0.402
Cadmium	mg/L	< 0.00001	0.000013	0.000019	0.000025	0.000022
Calcium	mg/L	197	203	217	221	278
Chromium	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Cobalt	mg/L	0.00118	0.00121	0.00154	0.00163	0.00164
Copper	mg/L	0.00147	0.0014	0.00151	0.00182	0.00146

Iron	mg/L	0.027	0.043	0.026	0.034	0.052
Lead	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Lithium	mg/L	0.0663	0.058	0.0741	0.0703	0.08
Magnesium	mg/L	46.5	48.9	52.3	55.7	61.6
Manganese	mg/L	0.208	0.258	0.26	0.264	0.297
Mercury	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0041	0.0047	0.0042	0.0041	0.004
Nickel	mg/L	0.005	0.0057	0.0063	0.0066	0.0069
Potassium	mg/L	21.6	22.9	23.5	23.8	25.6
Selenium	mg/L	0.00032	0.00038	0.00045	0.00048	0.00049
Silicon	mg/L	0.739	0.737	0.881	0.788	0.841
Silver	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Sodium	mg/L	303	327	335	352	377
Strontium	mg/L	3.23	3.52	3.47	3.61	3.99
Sulphur	mg/L	61.2	72.3	77.2	79.2	87.9
Thallium	mg/L	0.000026	0.000027	0.000038	0.000038	0.000029
Tin	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Titanium	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Uranium	mg/L	0.00079	0.00107	0.00072	0.00176	0.00118
Vanadium	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Zinc	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Zirconium	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
WQ07- Dissolved Metals						
Aluminum	mg/L	0.153	0.159	0.0641	0.14	0.102
Antimony	mg/L	0.00067	0.00068	0.00071	< 0.001	0.00069
Arsenic	mg/L	0.00345	0.00372	0.00347	0.00262	0.00197
Barium	mg/L	0.107	0.11	0.11	0.108	0.112
Beryllium	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001
Bismuth	mg/L	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001
Boron	mg/L	0.34	0.358	0.408	0.401	0.448
Cadmium	mg/L	< 0.00001	0.000011	0.000014	0.000021	< 0.00001

Chromium	mg/L	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001
Cobalt	mg/L	0.00117	0.00123	0.00153	0.00148	0.00174
Copper	mg/L	0.00128	0.00132	0.00137	0.00147	0.00143
Iron	mg/L	0.0249	0.0195	0.0093	0.013	0.0142
Lead	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0004	< 0.0002
Lithium	mg/L	0.0763	0.0789	0.0738	0.0763	0.0864
Manganese	mg/L	0.204	0.214	0.265	0.255	0.32
Mercury	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0042	0.0044	0.0043	0.0041	0.0042
Nickel	mg/L	0.0048	0.0051	0.0061	0.006	0.0075
Selenium	mg/L	0.00032	0.00034	0.00044	0.00046	0.00057
Silicon	mg/L	0.815	0.864	0.858	0.867	0.704
Silver	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00004	< 0.00002
Strontium	mg/L	3.63	3.73	3.52	3.9	3.95
Sulphur	mg/L	61.3	64.6	77.6	82.3	90.6
Thallium	mg/L	0.000029	0.000031	0.000041	0.000038	0.000031
Tin	mg/L	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005
Titanium	mg/L	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005
Uranium	mg/L	0.00076	0.00111	0.00047	0.00165	0.001
Vanadium	mg/L	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005
Zinc	mg/L	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005
Zirconium	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0001
WQ08- Radionuclides						
Radium-226	Bq/l	0.018	0.018	0.01	< 0.0050	0.015
WQ09- Toxicity						
Daphnia 48 h Static Acute Test - EC50	%	-	>100	>100	>100	>100
Daphnia 48 h static acute test - LC50	%	-	>100	>100	>100	>100
LC50 (96h) - Rainbow Trout	%	-	>100	>100	>100	>100
WQ10- Volatile Organics						

Benzene	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Ethylbenzene	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
F1 (C6-C10)	ug/L	< 25	< 25	< 25	< 25	< 25
F1 (C6-C10)-BTX	ug/L	< 25	< 25	< 25	< 25	< 25
F2 (C10-C16)	ug/L	< 100	< 100	< 100	< 100	< 100
F3 (C16-C34)	ug/L	< 200	< 200	< 200	< 200	< 200
F4 (C34-C50)	ug/L	< 200	< 200	< 200	< 200	< 200
m,p-Xylenes	ug/L	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
o-Xylene	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Reached baseline at C50	ug/L	YES	YES	YES	YES	YES
Toluene	ug/L	0.4	< 0.40	< 0.20	< 0.20	< 0.20
Xylenes	ug/L	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40

MEL-15 Sample date		9/7/2020
Parameter	Unit	
WQ02- Conventional Parameters		
Dissolved organic carbon	mg/L	5.9
Hardness, as CaCO ₃ (D)	mg/L	57.5
Hardness, as CaCO ₃ (T)	mg/L	55.7
pH (T)	pH units	7.72
Specific conductivity	umhos/cm	140
Total alkalinity, as CaCO ₃	mg/L	43
Total dissolved solids	mg/L	130
Total organic carbon	mg/L	6.2
Total suspended solids	mg/L	1
Turbidity	NTU	0.4
WQ03- Major Ions		
Bicarbonate, as CaCO ₃	mg/L	42
Calcium	mg/L	19.6
Carbonate, as CaCO ₃	mg/L	< 1.0
Chloride	mg/L	11
Cyanide	mg/L	< 0.0050
Cyanide (free)	mg/L	0.0016
Cyanide (WAD)	mg/L	< 0.0010
Magnesium	mg/L	2.07
Potassium	mg/L	1.13
Silica	mg/L	2.3
Sodium	mg/L	4.31
Sulphate	mg/L	11
WQ04- Nutrients and Chlorophyll a		
Nitrate	mg/L	< 0.10
Nitrate + nitrite	mg/L	< 0.10
Nitrite	mg/L	< 0.010
Orthophosphate	mg/L	< 0.010
Total ammonia	mg/L	< 0.050
Total Kjeldahl nitrogen	mg/L	0.3
Total phosphorus	mg/L	< 0.020
WQ06- Total Metals		
Aluminum	mg/L	0.0054
Antimony	mg/L	< 0.0005
Arsenic	mg/L	0.00111
Barium	mg/L	0.0152
Beryllium	mg/L	< 0.0001
Bismuth	mg/L	< 0.001
Boron	mg/L	< 0.05
Cadmium	mg/L	< 0.00001

Calcium	mg/L	18.9
Chromium	mg/L	< 0.001
Cobalt	mg/L	< 0.0002
Copper	mg/L	0.00111
Iron	mg/L	0.064
Lead	mg/L	< 0.0002
Lithium	mg/L	< 0.002
Magnesium	mg/L	2.04
Manganese	mg/L	0.0058
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.001
Nickel	mg/L	0.0013
Potassium	mg/L	1.13
Selenium	mg/L	< 0.0001
Silicon	mg/L	0.976
Silver	mg/L	< 0.00002
Sodium	mg/L	4.26
Strontium	mg/L	0.0944
Sulphur	mg/L	3.85
Thallium	mg/L	< 0.00001
Tin	mg/L	< 0.005
Titanium	mg/L	< 0.005
Uranium	mg/L	< 0.0001
Vanadium	mg/L	< 0.005
Zinc	mg/L	< 0.005
Zirconium	mg/L	< 0.0001
WQ07- Dissolved Metals		
Aluminum	mg/L	0.0035
Antimony	mg/L	< 0.0005
Arsenic	mg/L	0.00101
Barium	mg/L	0.0157
Beryllium	mg/L	< 0.0001
Bismuth	mg/L	< 0.001
Boron	mg/L	< 0.05
Cadmium	mg/L	< 0.00001
Chromium	mg/L	< 0.001
Cobalt	mg/L	< 0.0002
Copper	mg/L	0.00112
Iron	mg/L	0.0387
Lead	mg/L	< 0.0002
Lithium	mg/L	< 0.002
Manganese	mg/L	0.0031
Mercury	mg/L	< 0.00001

Molybdenum	mg/L	< 0.001
Nickel	mg/L	0.0014
Selenium	mg/L	< 0.0001
Silicon	mg/L	1
Silver	mg/L	< 0.00002
Strontium	mg/L	0.101
Sulphur	mg/L	3.8
Thallium	mg/L	< 0.00001
Tin	mg/L	< 0.005
Titanium	mg/L	< 0.005
Uranium	mg/L	< 0.0001
Vanadium	mg/L	< 0.005
Zinc	mg/L	< 0.005
Zirconium	mg/L	< 0.0001

MEL-16 Sample date		9/7/2020
Parameter	Unit	
WQ02- Conventional Parameters		
Dissolved organic carbon	mg/L	4.1
Hardness, as CaCO ₃ (D)	mg/L	42.1
Hardness, as CaCO ₃ (T)	mg/L	41.4
pH (T)	pH units	7.64
Specific conductivity	umhos/cm	120
Total alkalinity, as CaCO ₃	mg/L	28
Total dissolved solids	mg/L	105
Total organic carbon	mg/L	4.3
Total suspended solids	mg/L	2
Turbidity	NTU	0.5
WQ03- Major Ions		
Bicarbonate, as CaCO ₃	mg/L	28
Calcium	mg/L	13.8
Carbonate, as CaCO ₃	mg/L	< 1.0
Chloride	mg/L	15
Cyanide	mg/L	< 0.0050
Cyanide (free)	mg/L	< 0.001
Cyanide (WAD)	mg/L	< 0.0010
Magnesium	mg/L	1.88
Potassium	mg/L	1.13
Silica	mg/L	0.38
Sodium	mg/L	3.39
Sulphate	mg/L	2.8

WQ04- Nutrients and Chlorophyll a		
Nitrate	mg/L	< 0.10
Nitrate + nitrite	mg/L	< 0.10
Nitrite	mg/L	< 0.010
Orthophosphate	mg/L	< 0.010
Total ammonia	mg/L	< 0.050
Total Kjeldahl nitrogen	mg/L	0.22
Total phosphorus	mg/L	< 0.020
WQ06- Total Metals		
Aluminum	mg/L	0.0121
Antimony	mg/L	< 0.0005
Arsenic	mg/L	0.00232
Barium	mg/L	0.0216
Beryllium	mg/L	< 0.0001
Bismuth	mg/L	< 0.001
Boron	mg/L	< 0.05
Cadmium	mg/L	< 0.00001
Calcium	mg/L	13.4
Chromium	mg/L	< 0.001
Cobalt	mg/L	< 0.0002
Copper	mg/L	0.00102
Iron	mg/L	0.137
Lead	mg/L	< 0.0002
Lithium	mg/L	< 0.002
Magnesium	mg/L	1.89
Manganese	mg/L	0.0086
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.001
Nickel	mg/L	< 0.001
Potassium	mg/L	1.14
Selenium	mg/L	< 0.0001
Silicon	mg/L	0.177
Silver	mg/L	< 0.00002
Sodium	mg/L	3.41
Strontium	mg/L	0.0714
Sulphur	mg/L	< 3
Thallium	mg/L	< 0.00001
Tin	mg/L	< 0.005
Titanium	mg/L	< 0.005
Uranium	mg/L	< 0.0001
Vanadium	mg/L	< 0.005
Zinc	mg/L	< 0.005
Zirconium	mg/L	< 0.0001

WQ07- Dissolved Metals		
Aluminum	mg/L	0.0052
Antimony	mg/L	< 0.0005
Arsenic	mg/L	0.00178
Barium	mg/L	0.0213
Beryllium	mg/L	< 0.0001
Bismuth	mg/L	< 0.001
Boron	mg/L	< 0.05
Cadmium	mg/L	< 0.00001
Chromium	mg/L	< 0.001
Cobalt	mg/L	< 0.0002
Copper	mg/L	0.00091
Iron	mg/L	0.0523
Lead	mg/L	< 0.0002
Lithium	mg/L	< 0.002
Manganese	mg/L	0.0018
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.001
Nickel	mg/L	< 0.001
Selenium	mg/L	< 0.0001
Silicon	mg/L	0.165
Silver	mg/L	< 0.00002
Strontium	mg/L	0.071
Sulphur	mg/L	< 3.0
Thallium	mg/L	< 0.00001
Tin	mg/L	< 0.005
Titanium	mg/L	< 0.005
Uranium	mg/L	< 0.0001
Vanadium	mg/L	< 0.005
Zinc	mg/L	< 0.005
Zirconium	mg/L	< 0.0001

MEL-17 Sample date		9/7/2020
Parameter	Unit	
WQ02- Conventional Parameters		
Dissolved organic carbon	mg/L	9.3
Hardness, as CaCO ₃ (D)	mg/L	144
Hardness, as CaCO ₃ (T)	mg/L	144
pH (T)	pH units	7.85
Specific conductivity	umhos/cm	390
Total alkalinity, as CaCO ₃	mg/L	51

Total dissolved solids	mg/L	275
Total organic carbon	mg/L	9.4
Total suspended solids	mg/L	4
Turbidity	NTU	0.7
WQ03- Major Ions		
Bicarbonate, as CaCO ₃	mg/L	51
Calcium	mg/L	48.3
Carbonate, as CaCO ₃	mg/L	< 1.0
Chloride	mg/L	55
Cyanide	mg/L	< 0.0050
Cyanide (free)	mg/L	0.0012
Cyanide (WAD)	mg/L	< 0.0010
Magnesium	mg/L	5.67
Potassium	mg/L	2.68
Silica	mg/L	4.4
Sodium	mg/L	12.9
Sulphate	mg/L	40
WQ04- Nutrients and Chlorophyll a		
Nitrate	mg/L	0.2
Nitrate + nitrite	mg/L	0.2
Nitrite	mg/L	< 0.010
Orthophosphate	mg/L	< 0.010
Total ammonia	mg/L	0.11
Total Kjeldahl nitrogen	mg/L	0.58
Total phosphorus	mg/L	< 0.020
WQ05- General Organics		
Total oil and grease	mg/L	0.6
WQ06- Total Metals		
Aluminum	mg/L	0.0151
Antimony	mg/L	< 0.0005
Arsenic	mg/L	0.00092
Barium	mg/L	0.0407
Beryllium	mg/L	< 0.0001
Bismuth	mg/L	< 0.001
Boron	mg/L	< 0.05
Cadmium	mg/L	< 0.00001
Calcium	mg/L	48.1
Chromium	mg/L	< 0.001
Cobalt	mg/L	< 0.0002
Copper	mg/L	0.00152
Iron	mg/L	0.224
Lead	mg/L	< 0.0002
Lithium	mg/L	0.0096

Magnesium	mg/L	5.79
Manganese	mg/L	0.0378
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.001
Nickel	mg/L	0.0027
Potassium	mg/L	2.73
Selenium	mg/L	< 0.0001
Silicon	mg/L	1.93
Silver	mg/L	< 0.00002
Sodium	mg/L	13.2
Strontium	mg/L	0.393
Sulphur	mg/L	14.9
Thallium	mg/L	< 0.00001
Tin	mg/L	< 0.005
Titanium	mg/L	< 0.005
Uranium	mg/L	< 0.0001
Vanadium	mg/L	< 0.005
Zinc	mg/L	< 0.005
Zirconium	mg/L	< 0.0001
WQ07- Dissolved Metals		
Aluminum	mg/L	0.0041
Antimony	mg/L	< 0.0005
Arsenic	mg/L	0.00082
Barium	mg/L	0.0401
Beryllium	mg/L	< 0.0001
Bismuth	mg/L	< 0.001
Boron	mg/L	< 0.05
Cadmium	mg/L	< 0.00001
Chromium	mg/L	< 0.001
Cobalt	mg/L	< 0.0002
Copper	mg/L	0.00148
Iron	mg/L	0.129
Lead	mg/L	< 0.0002
Lithium	mg/L	0.009
Manganese	mg/L	0.0264
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.001
Nickel	mg/L	0.0025
Selenium	mg/L	< 0.0001
Silicon	mg/L	1.91
Silver	mg/L	< 0.00002
Strontium	mg/L	0.382
Sulphur	mg/L	14.2

Thallium	mg/L	< 0.00001
Tin	mg/L	< 0.005
Titanium	mg/L	< 0.005
Uranium	mg/L	< 0.0001
Vanadium	mg/L	< 0.005
Zinc	mg/L	< 0.005
Zirconium	mg/L	< 0.0001
WQ10- Volatile Organics		
Benzene	ug/L	< 0.20
Ethylbenzene	ug/L	< 0.20
F1 (C6-C10)	ug/L	< 25
F1 (C6-C10)-BTEX	ug/L	< 25
m,p-Xylenes	ug/L	< 0.40
o-Xylene	ug/L	< 0.20
Toluene	ug/L	< 0.20
Xylenes	ug/L	< 0.40

MEL-18 Sample date		9/7/2020
Parameter	Unit	
WQ02- Conventional Parameters		
Dissolved organic carbon	mg/L	4.3
Hardness, as CaCO ₃ (D)	mg/L	83.5
Hardness, as CaCO ₃ (T)	mg/L	84.3
pH (T)	pH units	7.59
Specific conductivity	umhos/cm	220
Total alkalinity, as CaCO ₃	mg/L	33
Total dissolved solids	mg/L	160
Total organic carbon	mg/L	4.5
Total suspended solids	mg/L	2
Turbidity	NTU	0.6
WQ03- Major Ions		
Bicarbonate, as CaCO ₃	mg/L	33
Calcium	mg/L	27.8
Carbonate, as CaCO ₃	mg/L	< 1.0
Chloride	mg/L	36
Cyanide	mg/L	< 0.0050
Cyanide (free)	mg/L	< 0.001
Cyanide (WAD)	mg/L	< 0.0010
Magnesium	mg/L	3.4
Potassium	mg/L	1.48
Silica	mg/L	1.5

Sodium	mg/L	5.09
Sulphate	mg/L	8.1
WQ04- Nutrients and Chlorophyll a		
Nitrate	mg/L	< 0.10
Nitrate + nitrite	mg/L	< 0.10
Nitrite	mg/L	< 0.010
Orthophosphate	mg/L	< 0.010
Total ammonia	mg/L	< 0.050
Total Kjeldahl nitrogen	mg/L	0.21
Total phosphorus	mg/L	< 0.020
WQ06- Total Metals		
Aluminum	mg/L	0.0049
Antimony	mg/L	< 0.0005
Arsenic	mg/L	0.00183
Barium	mg/L	0.0298
Beryllium	mg/L	< 0.0001
Bismuth	mg/L	< 0.001
Boron	mg/L	< 0.05
Cadmium	mg/L	< 0.00001
Calcium	mg/L	27.9
Chromium	mg/L	< 0.001
Cobalt	mg/L	0.00085
Copper	mg/L	0.0008
Iron	mg/L	0.349
Lead	mg/L	< 0.0002
Lithium	mg/L	0.0307
Magnesium	mg/L	3.58
Manganese	mg/L	0.148
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.001
Nickel	mg/L	0.0013
Potassium	mg/L	1.54
Selenium	mg/L	< 0.0001
Silicon	mg/L	0.67
Silver	mg/L	< 0.00002
Sodium	mg/L	5.45
Strontium	mg/L	0.229
Sulphur	mg/L	< 3
Thallium	mg/L	< 0.00001
Tin	mg/L	< 0.005
Titanium	mg/L	< 0.005
Uranium	mg/L	< 0.0001
Vanadium	mg/L	< 0.005

Zinc	mg/L	< 0.005
Zirconium	mg/L	< 0.0001
WQ07- Dissolved Metals		
Aluminum	mg/L	< 0.003
Antimony	mg/L	< 0.0005
Arsenic	mg/L	0.00145
Barium	mg/L	0.0285
Beryllium	mg/L	< 0.0001
Bismuth	mg/L	< 0.001
Boron	mg/L	< 0.05
Cadmium	mg/L	< 0.00001
Chromium	mg/L	< 0.001
Cobalt	mg/L	0.00083
Copper	mg/L	0.00073
Iron	mg/L	0.303
Lead	mg/L	< 0.0002
Lithium	mg/L	0.0322
Manganese	mg/L	0.128
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.001
Nickel	mg/L	0.0012
Selenium	mg/L	< 0.0001
Silicon	mg/L	0.68
Silver	mg/L	< 0.00002
Strontium	mg/L	0.218
Sulphur	mg/L	3.1
Thallium	mg/L	< 0.00001
Tin	mg/L	< 0.005
Titanium	mg/L	< 0.005
Uranium	mg/L	< 0.0001
Vanadium	mg/L	< 0.005
Zinc	mg/L	< 0.005
Zirconium	mg/L	< 0.0001

MEL-20 Sample date		9/7/2020
Parameter	Unit	
WQ02- Conventional Parameters		
Hardness, as CaCO ₃ (D)	mg/L	778
Hardness, as CaCO ₃ (T)	mg/L	779
pH (T)	pH units	7.71
Total alkalinity, as CaCO ₃	mg/L	110

Total dissolved solids	mg/L	2460
Total suspended solids	mg/L	37
Turbidity	NTU	5.9
WQ03- Major Ions		
Calcium	mg/L	196
Chloride	mg/L	870
Cyanide	mg/L	0.044
Fluoride	mg/L	0.19
Magnesium	mg/L	69.9
Potassium	mg/L	31.7
Sodium	mg/L	478
Sulphate	mg/L	440
WQ04- Nutrients and Chlorophyll a		
Nitrate	mg/L	23.6
Nitrate + nitrite	mg/L	24.1
Nitrite	mg/L	0.439
Orthophosphate	mg/L	0.056
Total ammonia	mg/L	15
Total phosphorus	mg/L	0.14
WQ06- Total Metals		
Aluminum	mg/L	0.656
Antimony	mg/L	0.00134
Arsenic	mg/L	0.149
Barium	mg/L	0.0924
Beryllium	mg/L	< 0.0001
Bismuth	mg/L	< 0.001
Boron	mg/L	0.472
Cadmium	mg/L	0.000094
Calcium	mg/L	198
Chromium	mg/L	0.0019
Cobalt	mg/L	0.00848
Copper	mg/L	0.0102
Iron	mg/L	1.05
Lead	mg/L	0.0034
Lithium	mg/L	0.0135
Magnesium	mg/L	69.3
Manganese	mg/L	0.719
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	0.0103
Nickel	mg/L	0.0376
Potassium	mg/L	32.1
Selenium	mg/L	0.00281
Silicon	mg/L	4.05

Silver	mg/L	0.000035
Sodium	mg/L	475
Strontium	mg/L	1.73
Sulphur	mg/L	173
Thallium	mg/L	0.000043
Tin	mg/L	< 0.005
Titanium	mg/L	0.0366
Uranium	mg/L	0.0107
Vanadium	mg/L	< 0.005
Zinc	mg/L	< 0.005
Zirconium	mg/L	0.00128
WQ07- Dissolved Metals		
Aluminum	mg/L	0.0232
Antimony	mg/L	0.0013
Arsenic	mg/L	0.121
Barium	mg/L	0.0861
Beryllium	mg/L	< 0.0002
Bismuth	mg/L	< 0.002
Boron	mg/L	0.481
Cadmium	mg/L	0.000088
Chromium	mg/L	< 0.002
Cobalt	mg/L	0.00888
Copper	mg/L	0.00985
Iron	mg/L	0.113
Lead	mg/L	0.00082
Lithium	mg/L	0.0137
Manganese	mg/L	0.69
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	0.0105
Nickel	mg/L	0.0395
Selenium	mg/L	0.00279
Silicon	mg/L	2.78
Silver	mg/L	< 0.00004
Strontium	mg/L	1.62
Sulphur	mg/L	173
Thallium	mg/L	0.000034
Tin	mg/L	< 0.01
Titanium	mg/L	< 0.01
Uranium	mg/L	0.0105
Vanadium	mg/L	< 0.01
Zinc	mg/L	< 0.01
Zirconium	mg/L	0.00055

MEL-21 Sample date		9/7/2020
Parameter	Unit	
WQ02- Conventional Parameters		
Hardness, as CaCO ₃ (D)	mg/L	720
Hardness, as CaCO ₃ (T)	mg/L	716
pH (T)	pH units	7.87
Total alkalinity, as CaCO ₃	mg/L	91
Total dissolved solids	mg/L	1670
Total suspended solids	mg/L	17
Turbidity	NTU	10
WQ03- Major Ions		
Calcium	mg/L	205
Chloride	mg/L	440
Cyanide	mg/L	< 0.0050
Fluoride	mg/L	0.14
Magnesium	mg/L	50.4
Potassium	mg/L	15.2
Sodium	mg/L	181
Sulphate	mg/L	330
WQ04- Nutrients and Chlorophyll a		
Nitrate	mg/L	2.67
Nitrate + nitrite	mg/L	2.71
Nitrite	mg/L	0.033
Orthophosphate	mg/L	< 0.010
Total ammonia	mg/L	0.69
Total phosphorus	mg/L	0.026
WQ06- Total Metals		
Aluminum	mg/L	0.387
Antimony	mg/L	0.00167
Arsenic	mg/L	0.0225
Barium	mg/L	0.0906
Beryllium	mg/L	< 0.0001
Bismuth	mg/L	< 0.001
Boron	mg/L	0.282
Cadmium	mg/L	0.000068
Calcium	mg/L	202
Chromium	mg/L	0.0012
Cobalt	mg/L	0.00545
Copper	mg/L	0.00516
Iron	mg/L	0.625
Lead	mg/L	0.00128

Lithium	mg/L	0.0496
Magnesium	mg/L	51.3
Manganese	mg/L	0.454
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	0.0117
Nickel	mg/L	0.0324
Potassium	mg/L	15.2
Selenium	mg/L	0.00043
Silicon	mg/L	3.75
Silver	mg/L	< 0.00002
Sodium	mg/L	184
Strontium	mg/L	1.64
Sulphur	mg/L	120
Thallium	mg/L	0.000021
Tin	mg/L	< 0.005
Titanium	mg/L	0.0293
Uranium	mg/L	0.0064
Vanadium	mg/L	< 0.005
Zinc	mg/L	< 0.005
Zirconium	mg/L	0.00073
WQ07- Dissolved Metals		
Aluminum	mg/L	0.013
Antimony	mg/L	0.00161
Arsenic	mg/L	0.0169
Barium	mg/L	0.0867
Beryllium	mg/L	< 0.0001
Bismuth	mg/L	< 0.001
Boron	mg/L	0.256
Cadmium	mg/L	0.000057
Chromium	mg/L	< 0.001
Cobalt	mg/L	0.00501
Copper	mg/L	0.00371
Iron	mg/L	0.0406
Lead	mg/L	0.00029
Lithium	mg/L	0.0473
Manganese	mg/L	0.418
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	0.0113
Nickel	mg/L	0.0293
Selenium	mg/L	0.00041
Silicon	mg/L	3.02
Silver	mg/L	< 0.00002
Strontium	mg/L	1.63

Sulphur	mg/L	117
Thallium	mg/L	0.000012
Tin	mg/L	< 0.005
Titanium	mg/L	< 0.005
Uranium	mg/L	0.00656
Vanadium	mg/L	< 0.005
Zinc	mg/L	< 0.005
Zirconium	mg/L	0.0003

MEL-22 Sample date		9/7/2020
Parameter	Unit	
WQ02- Conventional Parameters		
Hardness, as CaCO ₃ (D)	mg/L	1810
Hardness, as CaCO ₃ (T)	mg/L	1960
pH (T)	pH units	7.69
Specific conductivity	umhos/cm	7700
Total alkalinity, as CaCO ₃	mg/L	76
Total dissolved solids	mg/L	4880
Total organic carbon	mg/L	16
Total suspended solids	mg/L	4
Turbidity	NTU	1.8
WQ03- Major Ions		
Calcium	mg/L	526
Chloride	mg/L	2300
Cyanide	mg/L	0.0091
Fluoride	mg/L	0.15
Magnesium	mg/L	121
Potassium	mg/L	51.3
Sodium	mg/L	781
Sulphate	mg/L	380
WQ04- Nutrients and Chlorophyll a		
Nitrate	mg/L	28.8
Nitrate + nitrite	mg/L	29.5
Nitrite	mg/L	0.654
Orthophosphate	mg/L	< 0.010
Total ammonia	mg/L	8.5
Total phosphorus	mg/L	< 0.020
WQ06- Total Metals		
Aluminum	mg/L	0.046
Antimony	mg/L	< 0.0025
Arsenic	mg/L	0.0066
Barium	mg/L	0.154

Beryllium	mg/L	< 0.0005
Bismuth	mg/L	< 0.005
Boron	mg/L	0.595
Cadmium	mg/L	0.000211
Calcium	mg/L	559
Chromium	mg/L	< 0.005
Cobalt	mg/L	0.003
Copper	mg/L	0.0046
Iron	mg/L	0.205
Lead	mg/L	< 0.001
Lithium	mg/L	0.293
Magnesium	mg/L	136
Manganese	mg/L	0.596
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	0.0053
Nickel	mg/L	0.0304
Potassium	mg/L	55.3
Selenium	mg/L	0.00053
Silicon	mg/L	1.78
Silver	mg/L	< 0.0001
Sodium	mg/L	847
Strontium	mg/L	10.9
Sulphur	mg/L	149
Thallium	mg/L	0.000101
Tin	mg/L	< 0.025
Titanium	mg/L	< 0.025
Uranium	mg/L	0.00533
Vanadium	mg/L	< 0.025
Zinc	mg/L	< 0.025
Zirconium	mg/L	< 0.0005
WQ07- Dissolved Metals		
Aluminum	mg/L	0.016
Antimony	mg/L	< 0.0025
Arsenic	mg/L	0.00452
Barium	mg/L	0.14
Beryllium	mg/L	< 0.0005
Bismuth	mg/L	< 0.005
Boron	mg/L	0.532
Cadmium	mg/L	0.000218
Chromium	mg/L	< 0.005
Cobalt	mg/L	0.0029
Copper	mg/L	0.004
Iron	mg/L	0.053

Lead	mg/L	< 0.001
Lithium	mg/L	0.26
Manganese	mg/L	0.507
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.005
Nickel	mg/L	0.0286
Selenium	mg/L	< 0.0005
Silicon	mg/L	1.61
Silver	mg/L	< 0.0001
Strontium	mg/L	9.54
Sulphur	mg/L	132
Thallium	mg/L	0.000094
Tin	mg/L	< 0.025
Titanium	mg/L	< 0.025
Uranium	mg/L	0.0049
Vanadium	mg/L	< 0.025
Zinc	mg/L	0.037
Zirconium	mg/L	< 0.0005

MEL-23 Sample date		9/7/2020
Parameter	Unit	
WQ02- Conventional Parameters		
Hardness, as CaCO ₃ (D)	mg/L	999
Hardness, as CaCO ₃ (T)	mg/L	993
pH (T)	pH units	8
Total alkalinity, as CaCO ₃	mg/L	230
Total dissolved solids	mg/L	3420
Total suspended solids	mg/L	21
Turbidity	NTU	5.3
WQ03- Major Ions		
Calcium	mg/L	195
Chloride	mg/L	1300
Cyanide	mg/L	0.0071
Fluoride	mg/L	0.39
Magnesium	mg/L	124
Potassium	mg/L	52
Sodium	mg/L	772
Sulphate	mg/L	590
WQ04- Nutrients and Chlorophyll a		
Nitrate	mg/L	9.17
Nitrate + nitrite	mg/L	9.63
Nitrite	mg/L	0.463

Orthophosphate	mg/L	0.012
Total ammonia	mg/L	6.1
Total phosphorus	mg/L	0.041
WQ06- Total Metals		
Aluminum	mg/L	0.421
Antimony	mg/L	0.0047
Arsenic	mg/L	0.0299
Barium	mg/L	0.115
Beryllium	mg/L	< 0.0002
Bismuth	mg/L	< 0.002
Boron	mg/L	1.16
Cadmium	mg/L	0.000128
Calcium	mg/L	191
Chromium	mg/L	0.002
Cobalt	mg/L	0.0143
Copper	mg/L	0.0106
Iron	mg/L	0.757
Lead	mg/L	0.0015
Lithium	mg/L	0.0335
Magnesium	mg/L	125
Manganese	mg/L	0.839
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	0.0218
Nickel	mg/L	0.114
Potassium	mg/L	52.8
Selenium	mg/L	0.0026
Silicon	mg/L	4.53
Silver	mg/L	< 0.00004
Sodium	mg/L	764
Strontium	mg/L	1.8
Sulphur	mg/L	229
Thallium	mg/L	0.000053
Tin	mg/L	< 0.01
Titanium	mg/L	0.029
Uranium	mg/L	0.0218
Vanadium	mg/L	< 0.01
Zinc	mg/L	< 0.01
Zirconium	mg/L	0.00504
WQ07- Dissolved Metals		
Aluminum	mg/L	0.0088
Antimony	mg/L	0.0047
Arsenic	mg/L	0.0255
Barium	mg/L	0.113

Beryllium	mg/L	< 0.0002
Bismuth	mg/L	< 0.002
Boron	mg/L	1.24
Cadmium	mg/L	0.000119
Chromium	mg/L	< 0.002
Cobalt	mg/L	0.0135
Copper	mg/L	0.00945
Iron	mg/L	0.042
Lead	mg/L	< 0.0004
Lithium	mg/L	0.0374
Manganese	mg/L	0.819
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	0.0216
Nickel	mg/L	0.109
Selenium	mg/L	0.00256
Silicon	mg/L	3.88
Silver	mg/L	< 0.00004
Strontium	mg/L	1.78
Sulphur	mg/L	229
Thallium	mg/L	0.000048
Tin	mg/L	< 0.01
Titanium	mg/L	< 0.01
Uranium	mg/L	0.0217
Vanadium	mg/L	< 0.01
Zinc	mg/L	< 0.01
Zirconium	mg/L	0.00409

MEL-25 Sample date		9/7/2020
Parameter	Unit	
WQ02- Conventional Parameters		
Hardness, as CaCO ₃ (T)	mg/L	133
pH (T)	pH units	8.03
Total suspended solids	mg/L	1
WQ04- Nutrients and Chlorophyll a		
Total ammonia	mg/L	0.41
WQ05- General Organics		
Total oil and grease	mg/L	0.9
WQ06- Total Metals		
Aluminum	mg/L	0.0499
Antimony	mg/L	< 0.0005
Arsenic	mg/L	0.00096
Barium	mg/L	0.0291

Beryllium	mg/L	< 0.0001
Bismuth	mg/L	< 0.001
Boron	mg/L	0.081
Cadmium	mg/L	< 0.00001
Calcium	mg/L	33.2
Chromium	mg/L	< 0.001
Cobalt	mg/L	< 0.0002
Copper	mg/L	0.00173
Iron	mg/L	0.075
Lead	mg/L	< 0.0002
Lithium	mg/L	< 0.002
Magnesium	mg/L	12.2
Manganese	mg/L	0.0021
Molybdenum	mg/L	0.0035
Nickel	mg/L	0.0035
Potassium	mg/L	9
Selenium	mg/L	0.00055
Silicon	mg/L	2.18
Silver	mg/L	< 0.00002
Sodium	mg/L	26
Strontium	mg/L	0.142
Sulphur	mg/L	36
Thallium	mg/L	0.000013
Tin	mg/L	< 0.005
Titanium	mg/L	< 0.005
Uranium	mg/L	0.00137
Vanadium	mg/L	< 0.005
Zinc	mg/L	< 0.005
Zirconium	mg/L	< 0.0001
WQ10- Volatile Organics		
Benzene	ug/L	< 0.20
Ethylbenzene	ug/L	< 0.20
F1 (C6-C10)	ug/L	< 25
F1 (C6-C10)-BTEX	ug/L	< 25
F2 (C10-C16)	ug/L	< 100
F3 (C16-C34)	ug/L	< 200
F4 (C34-C50)	ug/L	< 200
m,p-Xylenes	ug/L	< 0.40
o-Xylene	ug/L	< 0.20
Reached baseline at C50	ug/L	YES
Toluene	ug/L	< 0.20
Xylenes	ug/L	< 0.40

Sample date		9/16/2020	9/16/2020	9/18/2020	9/23/2020	9/28/2020
Parameter	Unit	H2Lab	BV	H2Lab	BV	BV
WQ02- Conventional Parameters						
Dissolved organic carbon	mg/L	-	9.6	-	11	11
Dissolved Oxygen	mg/L	-	9.37	-	9.15	10.5
Hardness, as CaCO3 (D)	mg/L	-	4090	-	4000	3560
Hardness, as CaCO3 (T)	mg/L	-	4050	-	3790	3400
pH (D)	pH units	-	7.55	-	7.57	6.96
pH (T)	pH units	-	7.3	-	7.49	7.14
Specific conductivity	umhos/cm	-	29000	-	27000	24000
Specific conductivity	uS/cm	-	28000	-	27000	25000
Total alkalinity, as CaCO3	mg/L	-	53	-	52	38
Total dissolved solids (maxx-TDSC2)	mg/L	-	28000	-	27000	25000
Total dissolved solids (maxx-TDSCAL)	mg/L		16000		16000	15000
Total dissolved solids (SM2540C)	mg/L		18400		16900	15700
Total organic carbon	mg/L	-	10	-	10	11
Total suspended solids	mg/L	31	30	6	4	6
Turbidity	NTU	-	1.1	-	0.5	0.6
Volatile TSS	mg/L	3	6	2	3	4
WQ03- Major Ions						
Bicarbonate, as CaCO3	mg/L	-	52	-	51	38
Calcium (E200.8)	mg/L	-	755	-	729	667
Calcium (SW6010B)	mg/L		780		750	730
Carbonate, as CaCO3	mg/L	-	< 1.0	-	< 1.0	< 1.0
Chloride (E325.2)	mg/L	-	9400	-	9200	9200
Chloride (SM4500-Cl-)	mg/L		8900		9000	8100
Cyanide	mg/L	-	0.085	-	0.076	0.038

Cyanide (free)	mg/L	-	0.026	-	0.02	0.028
Cyanide (WAD)	mg/L	-	0.02	-	0.0046	0.018
Fluoride	mg/L	-	< 0.10	-	< 0.10	< 0.10
Magnesium (E200.8)	mg/L	-	535	-	529	461
Magnesium (SW6010B)	mg/L		540		490	490
Potassium (E200.8)	mg/L	-	180	-	181	163
Potassium (SW6010B)	mg/L		190		180	170
Silica	mg/L	-	2.9	-	2.7	4.3
Sodium (E200.8)	mg/L	-	4560	-	4530	3980
Sodium (SW6010B)	mg/L		4600		4400	4300
Sulphate (E325.2)	mg/L	-	1100	-	1100	1000
Sulphate (E375.4)	mg/L		1100		1000	1000
WQ04- Nutrients and Chlorophyll a						
Nitrate	mg/L	-	50.1	-	56.1	47.3
Nitrate + nitrite	mg/L	-	51.2	-	57.2	48.4
Nitrite	mg/L	-	1.14	-	1.1	1.07
Orthophosphate	mg/L	-	< 0.010	-	< 0.010	< 0.010
Total ammonia	mg/L	-	37	-	35	29
Total Kjeldahl nitrogen	mg/L	-	36	-	38	38
Total phosphorus	mg/L	-	0.052	-	0.083	0.045
WQ06- Total Metals						
Aluminum	mg/L	-	0.948	-	0.329	0.311
Antimony	mg/L	-	< 0.005	-	< 0.01	< 0.005
Arsenic	mg/L	-	0.0062	-	0.0056	0.0047
Barium	mg/L	-	0.155	-	0.145	0.141
Beryllium	mg/L	-	< 0.001	-	< 0.002	< 0.001
Bismuth	mg/L	-	< 0.01	-	< 0.02	< 0.01
Boron	mg/L	-	0.967	-	1.02	0.963
Cadmium	mg/L	-	< 0.0001	-	< 0.0002	< 0.0001
Calcium	mg/L	-	747	-	696	656
Chromium	mg/L	-	< 0.01	-	< 0.02	< 0.01

Cobalt	mg/L	-	0.0045	-	< 0.004	0.0043
Copper	mg/L	-	< 0.005	-	< 0.01	< 0.005
Iron	mg/L	-	1.2	-	< 0.2	< 0.1
Lead	mg/L	-	< 0.002	-	< 0.004	< 0.002
Lithium	mg/L	-	0.167	-	0.16	0.146
Magnesium	mg/L	-	530	-	498	429
Manganese	mg/L	-	0.252	-	0.212	0.249
Mercury	mg/L	-	< 0.00001	-	< 0.00001	< 0.00001
Molybdenum	mg/L	-	0.016	-	< 0.02	0.024
Nickel	mg/L	-	0.028	-	0.027	0.03
Potassium	mg/L	-	181	-	178	156
Selenium	mg/L	-	0.0013	-	< 0.002	0.0014
Silicon	mg/L	-	2.11	-	< 2	1.27
Silver	mg/L	-	< 0.0002	-	< 0.0004	< 0.0002
Sodium	mg/L	-	4620	-	4360	3740
Strontium	mg/L	-	16.9	-	15.6	14.6
Sulphur	mg/L	-	416	-	396	352
Thallium	mg/L	-	< 0.0001	-	< 0.0002	< 0.0001
Tin	mg/L	-	< 0.05	-	< 0.1	< 0.05
Titanium	mg/L	-	< 0.05	-	< 0.1	< 0.05
Uranium	mg/L	-	0.0022	-	0.0021	0.0022
Vanadium	mg/L	-	< 0.05	-	< 0.1	< 0.05
Zinc	mg/L	-	< 0.05	-	< 0.1	< 0.05
Zirconium	mg/L	-	< 0.001	-	< 0.002	< 0.001
WQ07- Dissolved Metals						
Aluminum	mg/L	-	0.074	-	0.153	0.071
Antimony	mg/L	-	< 0.005	-	< 0.01	< 0.01
Arsenic	mg/L	-	0.0037	-	0.0059	0.0043
Barium	mg/L	-	0.154	-	0.146	0.147
Beryllium	mg/L	-	< 0.001	-	< 0.002	< 0.002
Bismuth	mg/L	-	< 0.01	-	< 0.02	< 0.02

Boron	mg/L	-	0.972	-	1.12	1.1
Cadmium	mg/L	-	< 0.0001	-	< 0.0002	< 0.0002
Chromium	mg/L	-	< 0.01	-	< 0.02	< 0.02
Cobalt	mg/L	-	0.0038	-	0.0045	0.0047
Copper	mg/L	-	0.0031	-	0.0042	< 0.004
Iron	mg/L	-	< 0.05	-	< 0.1	< 0.1
Lead	mg/L	-	< 0.002	-	< 0.004	< 0.004
Lithium	mg/L	-	0.163	-	0.163	0.161
Manganese	mg/L	-	0.231	-	0.235	0.267
Mercury	mg/L	-	< 0.00001	-	< 0.00001	< 0.00001
Molybdenum	mg/L	-	0.017	-	0.027	0.024
Nickel	mg/L	-	0.027	-	0.03	0.032
Selenium	mg/L	-	0.0014	-	0.002	< 0.002
Silicon	mg/L	-	1.36	-	< 2	< 2
Silver	mg/L	-	< 0.0002	-	< 0.0004	< 0.0004
Strontium	mg/L	-	16.8	-	15.5	14.2
Sulphur	mg/L	-	406	-	395	366
Thallium	mg/L	-	< 0.0001	-	< 0.0002	< 0.0002
Tin	mg/L	-	< 0.05	-	< 0.1	< 0.1
Titanium	mg/L	-	< 0.05	-	< 0.1	< 0.1
Uranium	mg/L	-	0.0022	-	0.0023	0.0022
Vanadium	mg/L	-	< 0.05	-	< 0.1	< 0.1
Zinc	mg/L	-	< 0.05	-	< 0.1	< 0.1
Zirconium	mg/L	-	< 0.001	-	< 0.002	< 0.002
WQ08- Radionuclides						
Radium-226	Bq/l	-	0.29	-	0.13	0.16

MEL-SR Sample date		9/3/2020	9/3/2020	9/3/2020	9/3/2020
Sample name		MEL-SR1	MEL-SR11	MEL-SR3	MEL-SR7
Parameter	Unit				
WQ01- Field Measured					
Conductivity	uS/cm	1389	1983	434999	896
Dissolved oxygen	%	92	85	98.5	88
Dissolved oxygen	mg/L	10.15	9.15	9.22	9.92
pH	-	7.76	7.8	7.63	7.82
Temperature	°C	9.7	11.8	10.1	9.4
WQ02- Conventional Parameters					
Hardness, as CaCO ₃ (T)	mg/L	484	440	1820	476
pH (T)	pH units	7.94	8.11	7.88	7.95
Total alkalinity, as CaCO ₃	mg/L	170	210	140	170
Total dissolved solids	mg/L	905	1020	13600	900
Total suspended solids	mg/L	3	2	14	2
Turbidity	NTU	0.5	0.2	0.3	0.4
WQ03- Major Ions					
Chloride	mg/L	160	320	6900	150
Cyanide	mg/L	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Fluoride	mg/L	0.12	0.34	0.41	0.14
Sulphate	mg/L	260	280	1200	280
WQ04- Nutrients and Chlorophyll a					
Nitrate	mg/L	0.16	5.61	0.1	< 0.10
Nitrate + nitrite	mg/L	0.16	5.63	0.1	< 0.10
Nitrite	mg/L	< 0.010	0.011	< 0.010	< 0.010
Orthophosphate	mg/L	< 0.010	< 0.010	0.011	< 0.010
Total ammonia	mg/L	0.29	0.2	< 0.050	0.061
Total phosphorus	mg/L	< 0.020	< 0.020	0.041	< 0.020
WQ05- General Organics					

Total oil and grease	mg/L	0.6	< 0.50	0.7	< 0.50
WQ06- Total Metals					
Aluminum	mg/L	0.0397	0.0098	0.758	0.0081
Antimony	mg/L	< 0.0005	0.0194	< 0.0025	< 0.0005
Arsenic	mg/L	0.00281	0.00225	0.0032	0.00108
Barium	mg/L	0.0614	0.045	0.0504	0.0607
Beryllium	mg/L	< 0.0001	< 0.0001	< 0.0005	< 0.0001
Bismuth	mg/L	< 0.001	< 0.001	< 0.005	< 0.001
Boron	mg/L	0.081	0.237	1.11	0.067
Cadmium	mg/L	0.000017	0.000013	< 0.00005	< 0.00001
Calcium	mg/L	152	106	213	152
Chromium	mg/L	< 0.001	< 0.001	< 0.005	< 0.001
Cobalt	mg/L	0.00042	0.00031	< 0.001	0.00053
Copper	mg/L	0.00462	0.00356	0.0053	0.00357
Iron	mg/L	0.13	0.027	1.38	0.101
Lead	mg/L	< 0.0002	< 0.0002	< 0.001	< 0.0002
Lithium	mg/L	0.02	0.0229	0.056	0.0098
Magnesium	mg/L	25.1	42.6	312	23.4
Manganese	mg/L	0.0202	0.0013	0.0296	0.0421
Mercury	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0018	0.0105	< 0.005	0.0017
Nickel	mg/L	0.0133	0.0045	0.0112	0.0044
Potassium	mg/L	12.7	21.4	102	12
Selenium	mg/L	0.00011	0.00058	< 0.0005	< 0.0001
Silicon	mg/L	2.58	2.99	3.18	2.39
Silver	mg/L	< 0.00002	< 0.00002	< 0.0001	< 0.00002
Sodium	mg/L	85.3	222	2510	73.7
Strontium	mg/L	0.851	0.607	2.78	0.674
Sulphur	mg/L	86.1	95.2	306	88.5
Thallium	mg/L	0.000011	0.000023	< 0.00005	< 0.00001
Tin	mg/L	< 0.005	< 0.005	< 0.025	< 0.005

Titanium	mg/L	< 0.005	< 0.005	0.05	< 0.005
Uranium	mg/L	0.00256	0.0308	0.00259	0.00262
Vanadium	mg/L	< 0.005	< 0.005	< 0.025	< 0.005
Zinc	mg/L	0.0136	< 0.005	< 0.025	0.0108
Zirconium	mg/L	< 0.0001	< 0.0001	< 0.0005	< 0.0001

SECTION 3 • MATERIAL MANAGEMENT

3.1 LANDFILL / LANDFARM

The volume of material placed into the landfill is evaluated through periodic surveys. According to the most recent survey done September 12th 2020 the landfill contained approximately 18,087 m³ of material.

In September 2020, approximately 42 m³ of contaminated soil was transferred to the Type A Landfarm as a result of spills cleanup.

3.2 ORE

Approximately 128,729 tonnes of ore were processed through the Mill in September 2020.

3.3 WASTE ROCK STORAGE FACILITY

In September 2020, a total of 41,237 tonnes of waste rock was removed in the mine development process. 17,518 tonnes were used as underground dry rockfill. 7,953 tonnes was stockpiled for progressive closure cover.

3.4 TAILINGS

102,073 dry tonnes of filtered tailings were sent to the Tailing Storage Facility in September 2020. 26,656 tonnes of tailings were used for paste underground backfill.

SECTION 4 SPILL MANAGEMENT

4.1 INTERNAL AND REPORTABLE SPILLS

All spills reported internally (8) are listed in the table 4.1 and were managed according to Agnico's spill contingency plan. Spills were contained and cleaned up, contaminated material was disposed of in an appropriate manner, and the clean-up actions were monitored closely by the Environment Department. 5 reportable spills occurred in September 2020.

Table 4.1: Summary of Agnico's Spill Reports in September 2020

Date and time of occurrence	If material not listed in dropdown or more details, enter here	Estimated quantity (l)	Exact location of incident	Description of incident	Describe immediate corrective actions
Saturday, September 05, 2020 1:00:00 AM	Hydrocarbon	100.00	Side of the road towards Dyno	On September 5th, at approximately 11:00 pm, an estimated 100 L of mixed hydrocarbons spilled from an overturned Hyster RS46-36. The spill consisted of approximately 80 L of hydraulic oil, 15 L of transmission fluid and 5 L of diesel, which released from the vehicle due to damage sustained in the accident.	The spill was confined to a drainage channel, which is part of the sites' managed water system. No contaminants migrated off-site. A series of soil berms were rapidly constructed using an excavator, which blocked the steady flow of water in the channel, upstream and downstream of the source. The berms successfully prevented the spill migrating away from the overturned vehicle. Spill pads were deployed to absorb the hydrocarbons from the surface of the pooled water. The water was then removed and treated in the snow cell, using an oil/water separator. Soil within the channel with potential exposure to hydrocarbons was excavated and transported to the landfarm. Approximately 36 m3 of soil and gravel were removed. A Mini-RAE VOC detector was used during the excavation to verify contaminated material was removed.

Saturday, September 12, 2020 12:45:00 AM	Sewage Water	1,500.00	STP Main Camp	On September 11th 2020, at 11:45pm an overflow switch failed to trigger in the main camp sewage treatment plant, which caused a treatment tank to overflow, resulting in approximately 1.5m3 of untreated sewage to spill to the ground. No contaminants migrated off-site.	In response to the overflow, the treatment plant operator redirected influent flow to another tank. Effluent contained within the building was removed using a vacuum truck and input back into the system. A soil berm was deployed to isolate the spill at the source. Effluent contaminated gravel on the industrial pad was removed and disposed of in accordance with the waste management plan.
Saturday, September 12, 2020 12:30:00 PM	Hydraulic Oil	35.00	Itivia	A fitting attached to the hydraulic hose on the boom of the Kone Crane give away, approximately 35 litres of hydraulic oil was released onto the ground.	Spill pads were used to contain the spill and were disposed of adequately.
Wednesday, September 16, 2020 1:00:00 AM	Treated Effluent		MEL-26	Preliminary results for a sample collected at MEL-26 September 16, 2020 were received on September 18, 2020, indicating TSS levels of 34 mg/L, exceeding the maximum authorized concentration in a grab sample set out in MDMER. (Note that in order to rule out the possibility of a lab error a request was made to reanalyze the sample, which yielded a final result of 31 mg/L confirming the exceedance)	As due diligence, Agnico Eagle Mines Ltd. stopped discharge on September 18, 2020 and launched an investigation into the cause of the exceedance.
Thursday, September 17, 2020 5:00:00 AM	Coolant	40.00	WRSF3	A bolt broke down on a bracket, resulting in a 40 litres coolant spill.	Absorbent layers and buckets were used to contain and clean up the spill and contaminated material was disposed of adequately.
Thursday, September 17, 2020 6:30:00 AM	Treated saline water	50.00	Discharge to sea pump station	The PVC piping downstream of the discharge to sea pump station at Itivia	The operator/driver pressed the emergency stop.

				broke in 2 places. Treated saline water discharged for an estimated 10 seconds.	
Wednesday, September 23, 2020 7:00:00 AM	Diesel	12,229.00	Boiler Fuel Tank, South Side of MSB	A mechanical or electrical failure caused the automated fuel pump to continue filling the daily fuel tank, even though it was full. As the daily tank was continually overfilled excess fuel was released out of the vent pipe onto the ground outside the boiler set up. The fuel soaked into the pad by the boiler fuel tank and migrated down through the slope to the pad on the north side of the MSB (outside the warehouse bay doors).	Spill pads were placed to stop the fuel migrating and to absorb visible fuel. Utilizing the hyster, seacans in the effected area were moved to a designated location in the heavy equipment parking area. A back hoe created berms to contain the flow of fuel. Two sumps and shallow trenches were created to direct fuel into the sumps. The sumps were pumped into totes, the contaminated fuel will be shipped off site as hazardous waste.
Sunday, September 27, 2020 5:00:00 PM	Hydrex 6240	500.00	Front area of SWTP	While lifting a tote, forks broke through the tote causing the spill	Upon puncturing the tote, the operator acted quickly by using the loader to tip the tote onto its side, preventing it from emptying completely. Spill pads and absorbent booms were deployed in an initial attempt to prevent the spill from spreading. The material itself was a sludge-like consistency and did not absorb deep into the compacted pad. However, the spill occurred on a sloped area, so the material spread out over a large surface area. Workers manually began to shovel material into an empty tote, until a back-hoe arrived. The back-hoe was then used to scrape up a few inches of gravel/sand which helped to soak into the coagulant. The pile of contaminated

					gravel was then transferred into approximately 25 quatrex bags which will be shipped south as hazardous waste.
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