



Meliadine Gold Project
NWB 2AM-MEL1631
September, 2019 Monthly Report

Prepared for:
Nunavut Water Board

Prepared by:
Agnico Eagle Mines Limited – Meliadine Division

October 30th, 2019

Table of Contents

SECTION 1 • BACKGROUND	3
SECTION 2 • WATER MANAGEMENT	3
2.1 WATER USAGE	3
2.2 DEWATERING ACTIVITIES	3
2.3 MELIADINE DISCHARGE	3
2.4 MELVIN BAY DISCHARGE	3
2.5 SEEPAGE AND RUNOFF FROM THE LANDFILL AND LANDFARM	3
2.6 SEWAGE TREATMENT PLANT	3
2.7 CONTAINMENTS.....	4
2.8 MONITORING ANALYTICAL DATA	4
SECTION 3 • MATERIAL MANAGEMENT.....	40
3.1 LANDFILL / LANDFARM.....	40
3.2 ORE	40
3.3 WASTE ROCK STORAGE FACILITY.....	40
3.4 TAILINGS	40
SECTION 4 SPILL MANAGEMENT	41
4.1 INTERNAL AND REPORTABLE SPILLS	41

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 2019.

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 2019

	Monthly Usage (m ³)
Camp and Mill (MEL-11)	30,357
Construction – Batch Plant (MEL-26 – A8)	0
Dust suppression	0
Total September	30,357
Year to date 2019	201,995

2.2 DEWATERING ACTIVITIES

Dewatering of the Lake H-19 and H-20 started August 17th, a total of 61,486m³ was dewatered through the EWTP in September

2.3 MELIADINE DISCHARGE

Discharge from the EWTP into Meliadine Lake via the Final Discharge Point (MEL-14) started in July, a total of 173,677 m³ was discharged in September including the dewatering of H-19 and H-20.

2.4 MELVIN BAY DISCHARGE

Discharge to sea via the Final Discharge Point (MEL-26) started August 1st, a total of 11,884m³ was discharged in September.

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 2019.

2.6 SEWAGE TREATMENT PLANT

In September 2019, 3,217m³ of treated wastewater was discharged into CP1. 19m³ of sludge was removed during the month. The majority of the sludge is disposed of in the Tailings Storage Facility as approved, the sludge can also be utilized as nutrient in the site landfarm or shipped to the south with Agnico Eagle's hazmat if needed.

2.7 CONTAINMENTS

Discharged from the Itivia fuel containment facility (Station Mel-25) occurred during the summer and approximately 12,062m³ was discharged at the end of September. Water sample complied with the water Licence criteria.

2.8 MONITORING ANALYTICAL DATA

In September, numerous samples related to the water Licence were sampled. See below the analytical results from these monitoring stations. One exceedance occurred during the month of September at station MEL-14 for TDS.

MEL-03-01	Sample Date	9/14/2019
Parameter	Unit	
Field Measured		
pH	pH units	7.46
Specific conductivity	umhos/cm	73.1
Temperature	C	7.8
Dissolved Oxygen	%	104
Conventional Parameters		
pH	pH units	7.53
Specific conductivity	umhos/cm	74
Hardness, as CaCO ₃	mg/L	21.7
Hardness, Calcium Carbonate	mg/L	21.5
Total alkalinity, as CaCO ₃	mg/L	16
Total dissolved solids	mg/L	45
Total suspended solids	mg/L	< 1
Total organic carbon	mg/L	2.5
Dissolved organic carbon	mg/L	2.3
Turbidity	NTU	< 0.1
Dissolved Oxygen	mg/L	10.3
Major Ions		
Bicarbonate, as CaCO ₃	mg/L	16
Calcium	mg/L	6.82
Carbonate, as CaCO ₃	mg/L	< 1.0
Chloride	mg/L	9.1
Cyanide total	mg/L	< 0.0050
Cyanide (free)	mg/L	< 0.0010
Cyanide (WAD)	mg/L	< 0.0010
Magnesium	mg/L	1.13
Potassium	mg/L	0.889
Sodium	mg/L	4.47
Sulphate	mg/L	3.4
Silica	mg/L	0.18

Nutrients and Chlorophyll a		
Nitrate	mg/L	< 0.10
Nitrite	mg/L	< 0.010
Nitrate + nitrite	mg/L	< 0.10
Total ammonia	mg/L	< 0.050
Total Kjeldahl nitrogen	mg/L	0.16
Total phosphorus	mg/L	< 0.020
Orthophosphate	mg/L	< 0.010
Total Metals		
Aluminum	mg/L	0.0066
Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.0002
Barium	mg/L	0.0075
Beryllium	mg/L	< 0.00010
Bismuth	mg/L	< 0.0010
Boron	mg/L	< 0.05
Cadmium	mg/L	< 0.000010
Calcium	mg/L	6.72
Chromium	mg/L	< 0.0010
Cobalt	mg/L	< 0.00020
Copper	mg/L	0.0008
Iron	mg/L	0.014
Lead	mg/L	< 0.00020
Lithium	mg/L	< 0.0020
Magnesium	mg/L	1.14
Manganese	mg/L	0.0022
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.0010
Nickel	mg/L	< 0.0010
Potassium	mg/L	0.882
Selenium	mg/L	< 0.00010
Silicon	mg/L	0.109
Silver	mg/L	< 0.000020
Sodium	mg/L	4.49
Strontium	mg/L	0.0316
Sulphur	mg/L	< 3
Thallium	mg/L	< 0.000010
Tin	mg/L	< 0.0050
Titanium	mg/L	< 0.0050
Uranium	mg/L	< 0.00010
Vanadium	mg/L	< 0.0050
Zinc	mg/L	< 0.0050
Zirconium	mg/L	< 0.00010
Dissolved Metals		
Aluminum	mg/L	0.0035

Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.00021
Barium	mg/L	0.0073
Beryllium	mg/L	< 0.00010
Bismuth	mg/L	< 0.0010
Boron	mg/L	< 0.05
Cadmium	mg/L	< 0.000010
Chromium	mg/L	< 0.0010
Cobalt	mg/L	< 0.00020
Copper	mg/L	0.00066
Iron	mg/L	< 0.0050
Lead	mg/L	< 0.00020
Lithium	mg/L	< 0.0020
Manganese	mg/L	< 0.0010
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.0010
Nickel	mg/L	< 0.0010
Selenium	mg/L	< 0.00010
Silicon	mg/L	< 0.1
Silver	mg/L	< 0.000020
Strontium	mg/L	0.032
Sulphur	mg/L	< 3.0
Thallium	mg/L	< 0.000010
Tin	mg/L	< 0.0050
Titanium	mg/L	< 0.0050
Uranium	mg/L	< 0.00010
Vanadium	mg/L	< 0.0050
Zinc	mg/L	< 0.0050
Zirconium	mg/L	< 0.00010
Volatile Organics		
Benzene	mg/L	< 0.00020
Ethylbenzene	mg/L	< 0.00020
Toluene	mg/L	< 0.00020
Xylenes	mg/L	< 0.00040
m,p-Xylenes	mg/L	< 0.00040
o-Xylene	mg/L	< 0.00020
F1 (C6-C10)-BTX	mg/L	< 0.025
F1 (C6-C10)	mg/L	< 0.025
F2 (C10-C16)	mg/L	< 0.1
F3 (C16-C34)	mg/L	< 0.2
F4 (C34-C50)	mg/L	< 0.2
Reached baseline at C50	mg/L	YES
Radionuclides		
Radium-226	Bq/l	< 0.0050

MEL-11	Sample Date	9/1/2019
Parameter	Unit	
Field Measured		
pH	pH units	7.36
Conductivity	uS/cm	81.5
Temperature	°C	8.2
Dissolved oxygen	mg/L	8.39
Dissolved oxygen	%	71.2
Conventional Parameters		
pH	pH units	7.5
Specific conductivity	umhos/cm	80
Hardness, as CaCO ₃	mg/L	22.9
Hardness, Calcium Carbonate	mg/L	24.7
Total alkalinity, as CaCO ₃	mg/L	17
Total dissolved solids	mg/L	45
Total suspended solids	mg/L	< 1
Total organic carbon	mg/L	2.7
Dissolved organic carbon	mg/L	2.7
Turbidity	NTU	0.3
Major Ions		
Bicarbonate, as CaCO ₃	mg/L	16
Calcium	mg/L	7.17
Carbonate, as CaCO ₃	mg/L	< 1.0
Chloride	mg/L	11
Cyanide total	mg/L	< 0.0050
Cyanide Free	mg/L	< 0.0010
Cyanide WAD	mg/L	< 0.0010
Magnesium	mg/L	1.21
Potassium	mg/L	0.928
Sodium	mg/L	4.86
Sulphate	mg/L	3.7
Silica	mg/L	0.59
Nutrients and Chlorophyll a		
Nitrate	mg/L	< 0.10
Nitrite	mg/L	< 0.010
Nitrate + nitrite	mg/L	< 0.10
Total ammonia	mg/L	0.29
Total Kjeldahl nitrogen	mg/L	0.16
Total phosphorus	mg/L	< 0.020
Orthophosphate	mg/L	< 0.010
Total Metals		
Aluminum	mg/L	0.012
Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.00037

Barium	mg/L	0.0078
Beryllium	mg/L	< 0.00010
Bismuth	mg/L	< 0.0010
Boron	mg/L	< 0.05
Cadmium	mg/L	< 0.000010
Calcium	mg/L	7.77
Chromium	mg/L	< 0.0010
Cobalt	mg/L	< 0.00020
Copper	mg/L	0.0009
Iron	mg/L	0.035
Lead	mg/L	< 0.00020
Lithium	mg/L	< 0.0020
Magnesium	mg/L	1.29
Manganese	mg/L	0.0039
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.0010
Nickel	mg/L	< 0.0010
Potassium	mg/L	0.99
Selenium	mg/L	< 0.00010
Silicon	mg/L	0.195
Silver	mg/L	< 0.000020
Sodium	mg/L	5.28
Strontium	mg/L	0.0403
Sulphur	mg/L	< 3
Thallium	mg/L	< 0.000010
Tin	mg/L	< 0.0050
Titanium	mg/L	< 0.0050
Uranium	mg/L	< 0.00010
Vanadium	mg/L	< 0.0050
Zinc	mg/L	< 0.0050
Zirconium	mg/L	< 0.00010
Dissolved Metals		
Aluminum	mg/L	< 0.0030
Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.00029
Barium	mg/L	0.0074
Beryllium	mg/L	< 0.00010
Bismuth	mg/L	< 0.0010
Boron	mg/L	< 0.05
Cadmium	mg/L	< 0.000010
Chromium	mg/L	< 0.0010
Cobalt	mg/L	< 0.00020
Copper	mg/L	0.00067
Iron	mg/L	0.008
Lead	mg/L	< 0.00020

Lithium	mg/L	< 0.0020
Manganese	mg/L	< 0.0010
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.0010
Nickel	mg/L	< 0.0010
Selenium	mg/L	< 0.00010
Silicon	mg/L	0.149
Silver	mg/L	< 0.000020
Strontium	mg/L	0.0377
Sulphur	mg/L	< 3.0
Thallium	mg/L	< 0.000010
Tin	mg/L	< 0.0050
Titanium	mg/L	< 0.0050
Uranium	mg/L	< 0.00010
Vanadium	mg/L	< 0.0050
Zinc	mg/L	< 0.0050
Zirconium	mg/L	< 0.00010
Volatile Organics		
Benzene	mg/L	< 0.00020
Ethylbenzene	mg/L	< 0.00020
Toluene	mg/L	< 0.00020
Xylenes	mg/L	< 0.00040
m,p-Xylenes	mg/L	< 0.00040
o-Xylene	mg/L	< 0.00020
F1 (C6-C10)-BTEX	mg/L	< 0.025
F1 (C6-C10)	mg/L	< 0.025
F2 (C10-C16)	mg/L	< 0.1
F3 (C16-C34)	mg/L	< 0.2
F4 (C34-C50)	mg/L	< 0.2
Reached baseline at C50	mg/L	YES

MEL-12	Sample Date	9/3/2019	9/24/2019
Parameter	Unit		
Field Measured			
pH	pH units	8.1	7.45
Conductivity	uS/cm	4197	2666
Temperature	°C	5.7	10.7
Dissolved oxygen	mg/L	11.63	-
Dissolved oxygen	%	94.5	82.7
Conventional Parameters			
pH	pH units	7.62	7.73
Specific conductivity	umhos/cm	4100	4200
Hardness, as CaCO ₃	mg/L	839	917
Hardness, Calcium Carbonate	mg/L	877	936

Total alkalinity, as CaCO ₃	mg/L	59	65
Total dissolved solids	mg/L	2600	2490
Total suspended solids	mg/L	14	17
Total organic carbon	mg/L	16	15
Turbidity	NTU	4.4	7.8
Major Ions			
Calcium	mg/L	233	261
Chloride	mg/L	1100	1100
Cyanide	mg/L	0.0081	0.007
Fluoride	mg/L	< 0.10	< 0.10
Magnesium	mg/L	62.5	64.5
Potassium	mg/L	27.9	28.3
Sodium	mg/L	431	410
Sulphate	mg/L	180	190
Nutrients and Chlorophyll a			
Nitrate	mg/L	26.6	24.7
Nitrite	mg/L	1.42	1
Nitrate + nitrite	mg/L	28.1	25.7
Total ammonia	mg/L	7.3	7.2
Total phosphorus	mg/L	0.076	0.078
Orthophosphate	mg/L	< 0.010	< 0.010
Total Metals			
Aluminum	mg/L	0.125	0.283
Antimony	mg/L	< 0.0010	0.00068
Arsenic	mg/L	0.00457	0.00421
Barium	mg/L	0.13	0.139
Beryllium	mg/L	< 0.00020	< 0.00010
Bismuth	mg/L	< 0.0020	< 0.0010
Boron	mg/L	0.446	0.434
Cadmium	mg/L	0.000047	0.000065
Calcium	mg/L	245	268
Chromium	mg/L	< 0.0020	< 0.0010
Cobalt	mg/L	0.00149	0.00159
Copper	mg/L	0.003	0.00242
Iron	mg/L	0.235	0.297
Lead	mg/L	< 0.00040	0.00052
Lithium	mg/L	0.119	0.132
Magnesium	mg/L	64.4	64.9
Manganese	mg/L	0.17	0.318
Mercury	mg/L	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0025	0.0033
Nickel	mg/L	0.0075	0.0087
Potassium	mg/L	30.3	28.9
Selenium	mg/L	0.00032	0.00025
Silicon	mg/L	1.06	1.27

Silver	mg/L	< 0.000040	< 0.000020
Sodium	mg/L	432	443
Strontium	mg/L	4.26	5.25
Sulphur	mg/L	64.9	65.3
Thallium	mg/L	0.000059	0.000059
Tin	mg/L	< 0.01	< 0.0050
Titanium	mg/L	< 0.01	< 0.0050
Uranium	mg/L	0.00142	0.00171
Vanadium	mg/L	< 0.01	< 0.0050
Zinc	mg/L	0.016	0.0172
Zirconium	mg/L	< 0.00020	0.00016
Dissolved Metals			
Aluminum	mg/L	0.0438	0.0733
Antimony	mg/L	0.00057	0.00067
Arsenic	mg/L	0.00383	0.00297
Barium	mg/L	0.129	0.13
Beryllium	mg/L	< 0.00010	< 0.00010
Bismuth	mg/L	< 0.0010	< 0.0010
Boron	mg/L	0.397	0.419
Cadmium	mg/L	0.000036	0.000043
Chromium	mg/L	< 0.0010	< 0.0010
Cobalt	mg/L	0.00123	0.00096
Copper	mg/L	0.00189	0.00221
Iron	mg/L	0.0761	0.0935
Lead	mg/L	< 0.00020	0.00024
Lithium	mg/L	0.12	0.12
Manganese	mg/L	0.0886	0.0605
Mercury	mg/L	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0028	0.0032
Nickel	mg/L	0.0063	0.0073
Selenium	mg/L	0.00026	0.00043
Silicon	mg/L	0.89	1.06
Silver	mg/L	< 0.000020	< 0.000020
Strontium	mg/L	4.99	5.02
Sulphur	mg/L	57.5	64.5
Thallium	mg/L	0.000058	0.000056
Tin	mg/L	< 0.0050	< 0.0050
Titanium	mg/L	< 0.0050	< 0.0050
Uranium	mg/L	0.00151	0.00168
Vanadium	mg/L	< 0.0050	< 0.0050
Zinc	mg/L	0.0113	0.0218
Zirconium	mg/L	< 0.00010	0.00017

MEL-13	Sample Date	9/18/2019
Parameter	Unit	
Field Measured		
pH	pH units	7.89
Conductivity	uS/cm	86.7
Temperature	°C	7.6
Dissolved oxygen	%	99.6
Conventional Parameters		
pH	pH units	7.56
Specific conductivity	umhos/cm	90
Hardness, as CaCO ₃	mg/L	23.7
Total alkalinity, as CaCO ₃	mg/L	16
Total dissolved solids	mg/L	55
Total suspended solids	mg/L	1
Total organic carbon	mg/L	3.2
Dissolved organic carbon	mg/L	2.9
Turbidity	NTU	0.2
Major Ions		
Bicarbonate, as CaCO ₃	mg/L	16
Calcium	mg/L	7.3
Carbonate, as CaCO ₃	mg/L	< 1.0
Chloride	mg/L	13
Cyanide Total	mg/L	< 0.0050
Cyanide Free	mg/L	0.0016
Magnesium	mg/L	1.34
Potassium	mg/L	0.969
Sodium	mg/L	5.53
Sulphate	mg/L	3.8
Silica	mg/L	0.26
Nutrients and Chlorophyll a		
Nitrate	mg/L	< 0.10
Nitrite	mg/L	< 0.010
Nitrate + nitrite	mg/L	< 0.10
Total ammonia	mg/L	0.055
Total Kjeldahl nitrogen	mg/L	0.16
Total phosphorus	mg/L	0.025
Orthophosphate	mg/L	< 0.010
Total Metals		
Aluminum	mg/L	0.0115
Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.00043
Barium	mg/L	0.0078
Beryllium	mg/L	< 0.00010
Bismuth	mg/L	< 0.0010

Boron	mg/L	< 0.05
Cadmium	mg/L	< 0.000010
Calcium	mg/L	7.9
Chromium	mg/L	< 0.0010
Cobalt	mg/L	< 0.00020
Copper	mg/L	0.00084
Iron	mg/L	0.031
Lead	mg/L	< 0.00020
Lithium	mg/L	< 0.0020
Magnesium	mg/L	1.44
Manganese	mg/L	0.0035
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.0010
Nickel	mg/L	< 0.0010
Potassium	mg/L	1.05
Selenium	mg/L	< 0.00010
Silicon	mg/L	0.153
Silver	mg/L	< 0.000020
Sodium	mg/L	5.88
Strontium	mg/L	0.0459
Sulphur	mg/L	< 3
Thallium	mg/L	< 0.000010
Tin	mg/L	< 0.0050
Titanium	mg/L	< 0.0050
Uranium	mg/L	< 0.00010
Vanadium	mg/L	< 0.0050
Zinc	mg/L	< 0.0050
Zirconium	mg/L	< 0.00010
Dissolved Metals		
Aluminum	mg/L	< 0.0030
Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.00039
Barium	mg/L	0.0072
Beryllium	mg/L	< 0.00010
Bismuth	mg/L	< 0.0010
Boron	mg/L	< 0.05
Cadmium	mg/L	< 0.000010
Chromium	mg/L	< 0.0010
Cobalt	mg/L	< 0.00020
Copper	mg/L	0.00072
Iron	mg/L	0.0051
Lead	mg/L	< 0.00020
Lithium	mg/L	< 0.0020
Manganese	mg/L	< 0.0010
Mercury	mg/L	< 0.00001

Molybdenum	mg/L	0.0027
Nickel	mg/L	< 0.0010
Selenium	mg/L	< 0.00010
Silicon	mg/L	0.133
Silver	mg/L	< 0.000020
Strontium	mg/L	0.0448
Sulphur	mg/L	< 3.0
Thallium	mg/L	< 0.000010
Tin	mg/L	< 0.0050
Titanium	mg/L	< 0.0050
Uranium	mg/L	< 0.00010
Vanadium	mg/L	< 0.0050
Zinc	mg/L	< 0.0050
Zirconium	mg/L	< 0.00010
Volatile Organics		
Benzene	mg/L	< 0.00020
Ethylbenzene	mg/L	< 0.00020
Toluene	mg/L	< 0.00020
Xylenes	mg/L	< 0.00040
m,p-Xylenes	mg/L	< 0.00040
o-Xylene	mg/L	< 0.00020
F1 (C6-C10)-BTEX	mg/L	< 0.025
F1 (C6-C10)	mg/L	< 0.025
F2 (C10-C16)	mg/L	< 0.1
F3 (C16-C34)	mg/L	< 0.2
F4 (C34-C50)	mg/L	< 0.2
Reached baseline at C50	mg/L	YES
Radionuclides		
Radium-226	Bq/l	< 0.0050

MEL-14	Sample Date	9/3/2019	9/12/2019	9/13/2019	9/17/2019	9/24/2019
Parameter	Unit					
Field Measured						
pH	pH units	7.13	7	7.18	7.06	7.08
Conductivity	uS/cm	2171	2240	2225	1994	2147
Temperature	°C	7.13	18.3	12	10.8	12.1
Dissolved oxygen	mg/L	-	7.67	8.12	-	-
Dissolved oxygen	%	67.5	76.9	77.4	102	101.2
Conventional Parameters						
pH	pH units	7.53	7.59	-	7.5	7.67
Specific conductivity	umhos/cm	2100	2300	2200	2100	2100
Dissolved Oxygen	mg/L	10.4	9.49	-	10	10
Biochemical Oxygen Demand, 5 Day	mg/L	< 2	< 2	-	< 2	< 2

Hardness, as CaCO ₃	mg/L	450	453	-	399	462
Hardness, Calcium Carbonate	mg/L	460	422	-	392	440
Total alkalinity, as CaCO ₃	mg/L	47	51	-	25	46
Total dissolved solids	mg/L	1300	1400	1430	1290	1320
Total suspended solids	mg/L	5	3	-	2	3
Total organic carbon	mg/L	12	12	-	4.3	11
Dissolved organic carbon	mg/L	10	11	-	4	11
Turbidity	NTU	1	0.4	-	0.9	0.5
Major Ions						
Bicarbonate, as CaCO ₃	mg/L	47	51	-	25	46
Calcium	mg/L	125	128	-	108	125
Carbonate, as CaCO ₃	mg/L	< 1.0	< 1.0	-	< 1.0	< 1.0
Chloride	mg/L	530	550	-	530	510
Cyanide total	mg/L	< 0.0050	< 0.0050	-	< 0.0050	< 0.0050
Cyanide Free	mg/L	0.0021	< 0.001	-	< 0.001	0.0016
Cyanide WAD	mg/L	0.001	0.001	-	< 0.001	< 0.001
Magnesium	mg/L	33.5	32.7	-	29.8	31.1
Potassium	mg/L	14.3	14.7	-	14.7	14
Sodium	mg/L	201	205	-	236	201
Sulphate	mg/L	82	90	-	75	84
Silica	mg/L	1.2	1.2	-	0.81	1.9
Nutrients and Chlorophyll a						
Nitrate	mg/L	12.3	13.5	-	13.7	11.6
Nitrite	mg/L	0.595	0.585	-	0.464	0.434
Nitrate + nitrite	mg/L	12.9	14.1	-	14.1	12
Total ammonia	mg/L	3.4	3.5	-	3.6	3.9
Total Kjeldahl nitrogen	mg/L	4.2	4.2	-	3.3	3.6
Total phosphorus	mg/L	< 0.020	< 0.020	-	< 0.020	0.024
Orthophosphate	mg/L	< 0.010	0.019	-	< 0.010	< 0.010
Total Metals						
Aluminum	mg/L	0.543	0.254	-	0.0774	0.166
Antimony	mg/L	< 0.0025	< 0.0005	-	< 0.0005	< 0.0005
Arsenic	mg/L	0.002	0.00207	-	0.00119	0.00193
Barium	mg/L	0.0726	0.0727	-	0.053	0.0724
Beryllium	mg/L	< 0.00050	< 0.00001	-	< 0.00001	< 0.00001
Bismuth	mg/L	< 0.0050	< 0.001	-	< 0.001	< 0.001
Boron	mg/L	< 0.25	0.184	-	0.327	0.315
Cadmium	mg/L	< 0.000050	0.000016	-	0.000019	0.000022
Calcium	mg/L	128	120	-	112	131
Chromium	mg/L	< 0.0050	< 0.001	-	< 0.001	< 0.001
Cobalt	mg/L	< 0.0010	0.00051	-	0.00043	0.00053
Copper	mg/L	< 0.0025	0.00088	-	0.00065	0.00084
Iron	mg/L	0.122	0.106	-	0.276	0.052
Lead	mg/L	< 0.0010	< 0.0002	-	< 0.0002	< 0.0002

Lithium	mg/L	0.058	0.0541	-	0.0681	0.0671
Magnesium	mg/L	33.9	29.8	-	28.7	32.6
Manganese	mg/L	0.0394	0.0342	-	0.0338	0.0539
Mercury	mg/L	< 0.00001	< 0.00001	-	< 0.00001	< 0.00001
Molybdenum	mg/L	< 0.0050	0.0018	-	0.0011	0.0019
Nickel	mg/L	< 0.0050	0.0036	-	0.0034	0.0042
Potassium	mg/L	13.9	15.1	-	14.3	14.5
Selenium	mg/L	< 0.00050	0.00011	-	0.00011	0.00014
Silicon	mg/L	0.677	0.606	-	0.419	1.08
Silver	mg/L	< 0.00010	< 0.00002	-	< 0.00002	< 0.00002
Sodium	mg/L	201	190	-	227	224
Strontium	mg/L	2.04	1.96	-	2.18	2.25
Sulphur	mg/L	28.5	31.3	-	26.4	32.4
Thallium	mg/L	< 0.000050	< 0.000010	-	0.000022	0.000024
Tin	mg/L	< 0.025	< 0.005	-	< 0.005	< 0.005
Titanium	mg/L	< 0.025	< 0.005	-	< 0.005	< 0.005
Uranium	mg/L	< 0.00050	0.00026	-	0.00034	0.00035
Vanadium	mg/L	< 0.025	< 0.005	-	< 0.005	< 0.005
Zinc	mg/L	< 0.025	< 0.005	-	< 0.005	0.0059
Zirconium	mg/L	< 0.00050	< 0.0001	-	< 0.0001	< 0.0001
Dissolved Metals						
Aluminum	mg/L	0.0584	0.0427	-	0.028	0.0355
Antimony	mg/L	< 0.00050	< 0.00050	-	< 0.00050	< 0.00050
Arsenic	mg/L	0.00176	0.0022	-	0.00114	0.00177
Barium	mg/L	0.0745	0.0784	-	0.0506	0.0683
Beryllium	mg/L	< 0.00010	< 0.00010	-	< 0.00010	< 0.00010
Bismuth	mg/L	< 0.0010	< 0.0010	-	< 0.0010	< 0.0010
Boron	mg/L	0.196	0.188	-	0.35	0.302
Cadmium	mg/L	0.000019	0.000014	-	0.000019	0.000021
Chromium	mg/L	< 0.0010	< 0.0010	-	< 0.0010	< 0.0010
Cobalt	mg/L	0.00059	0.00056	-	0.00037	0.00049
Copper	mg/L	0.00101	0.00087	-	0.00059	0.00069
Iron	mg/L	0.1	0.0698	-	0.0435	0.0339
Lead	mg/L	0.00036	< 0.0002	-	< 0.0002	< 0.0002
Lithium	mg/L	0.0564	0.0541	-	0.0657	0.0615
Manganese	mg/L	0.0335	0.0316	-	0.0128	0.0426
Mercury	mg/L	< 0.00001	< 0.00001	-	< 0.00001	< 0.00001
Molybdenum	mg/L	0.0054	0.0021	-	0.0011	0.0018
Nickel	mg/L	0.0039	0.0039	-	0.0032	0.0039
Selenium	mg/L	0.00014	0.00012	-	0.0001	0.00015
Silicon	mg/L	0.635	0.575	-	0.48	1.01
Silver	mg/L	< 0.000020	< 0.000020	-	< 0.000020	< 0.000020
Strontium	mg/L	2.33	2.42	-	2.24	2.17

Sulphur	mg/L	31	30	-	30.1	31.7
Thallium	mg/L	0.000027	0.000011	-	0.000024	0.000024
Tin	mg/L	< 0.0050	< 0.0050	-	< 0.0050	< 0.0050
Titanium	mg/L	< 0.0050	< 0.0050	-	< 0.0050	< 0.0050
Uranium	mg/L	0.0003	0.00029	-	0.00035	0.00032
Vanadium	mg/L	< 0.0050	< 0.0050	-	< 0.0050	< 0.0050
Zinc	mg/L	0.0107	< 0.0050	-	< 0.0050	< 0.0050
Zirconium	mg/L	< 0.00010	< 0.00010	-	< 0.00010	< 0.00010
Volatile Organics						
Benzene	mg/L	< 0.00020	< 0.00020	-	< 0.00020	< 0.00020
Ethylbenzene	mg/L	< 0.00020	< 0.00020	-	< 0.00020	< 0.00020
Toluene	mg/L	< 0.00020	< 0.00020	-	< 0.00020	< 0.00020
Xylenes	mg/L	< 0.00040	< 0.00040	-	< 0.00040	< 0.00040
m,p-Xylenes	mg/L	< 0.00040	< 0.00040	-	< 0.00040	< 0.00040
o-Xylene	mg/L	< 0.00020	< 0.00020	-	< 0.00020	< 0.00020
F1 (C6-C10)-BTEX	mg/L	< 0.025	< 0.025	-	< 0.025	< 0.025
F1 (C6-C10)	mg/L	< 0.025	< 0.025	-	< 0.025	< 0.025
F2 (C10-C16)	mg/L	< 0.1	< 0.1	-	< 0.1	< 0.1
F3 (C16-C34)	mg/L	< 0.2	< 0.2	-	< 0.2	< 0.2
F4 (C34-C50)	mg/L	< 0.2	< 0.2	-	< 0.2	< 0.2
Reached baseline at C50	mg/L	YES	YES	-	YES	YES
Toxicity						
Atypical colonies	CFU/100mL	400	3400	-	9000	-
Escherichia coli	CFU/100mL	< 2	< 2	-	2	-
Fecal Coliform	CFU/100mL	< 2	< 2	-	2	-
Total Coliform	CFU/100mL	880	< 100	-	3500	-
Aerobic heterotrophic bacteria	CFU/100mL	100	2580	-	1700	-
Radionuclides						
Radium-226	Bq/l	< 0.0050	< 0.0050	-	< 0.0050	< 0.0050

MEL-15	Sample Date	9/4/2019
Parameter	Unit	
Field Measured		
pH	pH units	6.96
Conductivity	uS/cm	115.9
Temperature	°C	4.5
Dissolved oxygen	mg/L	13.09
Dissolved oxygen	%	103.7
Conventional Parameters		
pH	pH units	7.76
Specific conductivity	umhos/cm	120
Hardness, as CaCO3	mg/L	50.7
Hardness, Calcium Carbonate	mg/L	46.9

Total alkalinity, as CaCO ₃	mg/L	39
Total dissolved solids	mg/L	80
Total suspended solids	mg/L	3
Total organic carbon	mg/L	5.6
Dissolved organic carbon	mg/L	5.4
Turbidity	NTU	0.5
Major Ions		
Bicarbonate, as CaCO ₃	mg/L	39
Calcium	mg/L	17.3
Carbonate, as CaCO ₃	mg/L	< 1.0
Chloride	mg/L	8.6
Cyanide total	mg/L	< 0.0050
Cyanide Free	mg/L	0.0023
Cyanide WAD	mg/L	< 0.0010
Magnesium	mg/L	1.82
Potassium	mg/L	1.03
Sodium	mg/L	4.21
Sulphate	mg/L	4.9
Silica	mg/L	0.97
Nutrients and Chlorophyll a		
Nitrate	mg/L	< 0.10
Nitrite	mg/L	< 0.010
Nitrate + nitrite	mg/L	< 0.10
Total ammonia	mg/L	0.15
Total Kjeldahl nitrogen	mg/L	0.29
Total phosphorus	mg/L	< 0.020
Orthophosphate	mg/L	< 0.010
Total Metals		
Aluminum	mg/L	0.0068
Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.00087
Barium	mg/L	0.0116
Beryllium	mg/L	< 0.00010
Bismuth	mg/L	< 0.0010
Boron	mg/L	< 0.05
Cadmium	mg/L	0.000025
Calcium	mg/L	15.9
Chromium	mg/L	< 0.0010
Cobalt	mg/L	< 0.00020
Copper	mg/L	0.00083
Iron	mg/L	0.075
Lead	mg/L	< 0.00020
Lithium	mg/L	< 0.0020
Magnesium	mg/L	1.75
Manganese	mg/L	0.0059

Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.0010
Nickel	mg/L	0.0012
Potassium	mg/L	1.03
Selenium	mg/L	< 0.00010
Silicon	mg/L	0.494
Silver	mg/L	< 0.000020
Sodium	mg/L	3.94
Strontium	mg/L	0.0736
Sulphur	mg/L	< 3
Thallium	mg/L	< 0.000010
Tin	mg/L	< 0.0050
Titanium	mg/L	< 0.0050
Uranium	mg/L	< 0.00010
Vanadium	mg/L	< 0.0050
Zinc	mg/L	< 0.0050
Zirconium	mg/L	< 0.00010
Dissolved Metals		
Aluminum	mg/L	0.0034
Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.00075
Barium	mg/L	0.0117
Beryllium	mg/L	< 0.00010
Bismuth	mg/L	< 0.0010
Boron	mg/L	< 0.05
Cadmium	mg/L	0.000017
Chromium	mg/L	< 0.0010
Cobalt	mg/L	< 0.00020
Copper	mg/L	0.00073
Iron	mg/L	0.0356
Lead	mg/L	< 0.00020
Lithium	mg/L	< 0.0020
Manganese	mg/L	0.0012
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.0010
Nickel	mg/L	0.0011
Selenium	mg/L	< 0.00010
Silicon	mg/L	0.535
Silver	mg/L	< 0.000020
Strontium	mg/L	0.0749
Sulphur	mg/L	< 3.0
Thallium	mg/L	< 0.000010
Tin	mg/L	< 0.0050
Titanium	mg/L	< 0.0050
Uranium	mg/L	< 0.00010

Vanadium	mg/L	< 0.0050
Zinc	mg/L	< 0.0050
Zirconium	mg/L	< 0.00010

MEL-16	Sample Date	9/1/2019
Parameter	Unit	
Field Measured		
pH	pH units	7.4
Conductivity	uS/cm	105.8
Temperature	°C	4.4
Dissolved oxygen	mg/L	10.56
Dissolved oxygen	%	81.5
Conventional Parameters		
pH	pH units	7.58
Specific conductivity	umhos/cm	110
Hardness, as CaCO ₃	mg/L	39.9
Hardness, Calcium Carbonate	mg/L	34.2
Total alkalinity, as CaCO ₃	mg/L	25
Total dissolved solids	mg/L	75
Total suspended solids	mg/L	5
Total organic carbon	mg/L	5.2
Dissolved organic carbon	mg/L	4.5
Turbidity	NTU	1.4
Major Ions		
Bicarbonate, as CaCO ₃	mg/L	25
Calcium	mg/L	13.1
Carbonate, as CaCO ₃	mg/L	< 1.0
Chloride	mg/L	15
Cyanide total	mg/L	< 0.0050
Cyanide Free	mg/L	< 0.0010
Cyanide WAD	mg/L	< 0.0010
Magnesium	mg/L	1.78
Potassium	mg/L	1.07
Sodium	mg/L	3.02
Sulphate	mg/L	1.6
Silica	mg/L	0.33
Nutrients and Chlorophyll a		
Nitrate	mg/L	< 0.10
Nitrite	mg/L	< 0.010
Nitrate + nitrite	mg/L	< 0.10
Total ammonia	mg/L	0.33
Total Kjeldahl nitrogen	mg/L	0.29
Total phosphorus	mg/L	< 0.020
Orthophosphate	mg/L	< 0.010

Total Metals		
Aluminum	mg/L	0.0197
Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.0013
Barium	mg/L	0.0182
Beryllium	mg/L	< 0.00010
Bismuth	mg/L	< 0.0010
Boron	mg/L	< 0.05
Cadmium	mg/L	< 0.000010
Calcium	mg/L	11.1
Chromium	mg/L	< 0.0010
Cobalt	mg/L	< 0.00020
Copper	mg/L	0.00097
Iron	mg/L	0.179
Lead	mg/L	< 0.00020
Lithium	mg/L	< 0.0020
Magnesium	mg/L	1.56
Manganese	mg/L	0.0102
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.0010
Nickel	mg/L	< 0.0010
Potassium	mg/L	0.985
Selenium	mg/L	< 0.00010
Silicon	mg/L	0.23
Silver	mg/L	< 0.000020
Sodium	mg/L	2.81
Strontium	mg/L	0.0601
Sulphur	mg/L	< 3
Thallium	mg/L	< 0.000010
Tin	mg/L	< 0.0050
Titanium	mg/L	< 0.0050
Uranium	mg/L	< 0.00010
Vanadium	mg/L	< 0.0050
Zinc	mg/L	< 0.0050
Zirconium	mg/L	< 0.00010
Dissolved Metals		
Aluminum	mg/L	0.0089
Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.00094
Barium	mg/L	0.0202
Beryllium	mg/L	< 0.00010
Bismuth	mg/L	< 0.0010
Boron	mg/L	< 0.05
Cadmium	mg/L	0.000094
Chromium	mg/L	< 0.0010

Cobalt	mg/L	< 0.00020
Copper	mg/L	0.00135
Iron	mg/L	0.0522
Lead	mg/L	< 0.00020
Lithium	mg/L	< 0.0020
Manganese	mg/L	0.0022
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.0010
Nickel	mg/L	< 0.0010
Selenium	mg/L	< 0.00010
Silicon	mg/L	0.218
Silver	mg/L	< 0.000020
Strontium	mg/L	0.0684
Sulphur	mg/L	< 3.0
Thallium	mg/L	< 0.000010
Tin	mg/L	< 0.0050
Titanium	mg/L	< 0.0050
Uranium	mg/L	< 0.00010
Vanadium	mg/L	< 0.0050
Zinc	mg/L	< 0.0050
Zirconium	mg/L	< 0.00010

MEL-17	Sample Date	9/3/2019
Parameter	Unit	
Field Measured		
pH	pH units	7.84
Conductivity	uS/cm	300.6
Temperature	°C	6.6
Dissolved oxygen	mg/L	12.84
Dissolved oxygen	%	104.6
Conventional Parameters		
pH	pH units	7.82
Specific conductivity	umhos/cm	290
Hardness, as CaCO ₃	mg/L	113
Hardness, Calcium Carbonate	mg/L	114
Total alkalinity, as CaCO ₃	mg/L	50
Total dissolved solids	mg/L	235
Total suspended solids	mg/L	< 1
Total organic carbon	mg/L	10
Dissolved organic carbon	mg/L	9.6
Turbidity	NTU	0.4
Major Ions		
Bicarbonate, as CaCO ₃	mg/L	49
Calcium	mg/L	36.7

Carbonate, as CaCO ₃	mg/L	< 1.0
Chloride	mg/L	45
Cyanide total	mg/L	< 0.0050
Cyanide Free	mg/L	0.0012
Cyanide WAD	mg/L	< 0.0010
Magnesium	mg/L	5.16
Potassium	mg/L	2.08
Sodium	mg/L	12
Sulphate	mg/L	12
Silica	mg/L	3.2
Nutrients and Chlorophyll a		
Nitrate	mg/L	< 0.10
Nitrite	mg/L	< 0.010
Nitrate + nitrite	mg/L	< 0.10
Total ammonia	mg/L	0.055
Total Kjeldahl nitrogen	mg/L	0.47
Total phosphorus	mg/L	< 0.020
Orthophosphate	mg/L	0.022
General Organics		
Total oil and grease	mg/L	1.4
Total Metals		
Aluminum	mg/L	0.0091
Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.00065
Barium	mg/L	0.0284
Beryllium	mg/L	< 0.00010
Bismuth	mg/L	< 0.0010
Boron	mg/L	< 0.05
Cadmium	mg/L	0.000014
Calcium	mg/L	37.7
Chromium	mg/L	< 0.0010
Cobalt	mg/L	< 0.00020
Copper	mg/L	0.00118
Iron	mg/L	0.225
Lead	mg/L	< 0.00020
Lithium	mg/L	0.0067
Magnesium	mg/L	4.85
Manganese	mg/L	0.0267
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.0010
Nickel	mg/L	0.0022
Potassium	mg/L	2.07
Selenium	mg/L	< 0.00010
Silicon	mg/L	1.81
Silver	mg/L	< 0.000020

Sodium	mg/L	11
Strontium	mg/L	0.249
Sulphur	mg/L	4.86
Thallium	mg/L	< 0.000010
Tin	mg/L	< 0.0050
Titanium	mg/L	< 0.0050
Uranium	mg/L	0.00012
Vanadium	mg/L	< 0.0050
Zinc	mg/L	< 0.0050
Zirconium	mg/L	< 0.00010
Dissolved Metals		
Aluminum	mg/L	0.005
Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.00062
Barium	mg/L	0.0284
Beryllium	mg/L	< 0.00010
Bismuth	mg/L	< 0.0010
Boron	mg/L	< 0.05
Cadmium	mg/L	0.000013
Chromium	mg/L	< 0.0010
Cobalt	mg/L	< 0.00020
Copper	mg/L	0.00115
Iron	mg/L	0.173
Lead	mg/L	< 0.00020
Lithium	mg/L	0.0069
Manganese	mg/L	0.0256
Molybdenum	mg/L	< 0.0010
Nickel	mg/L	0.0024
Selenium	mg/L	< 0.00010
Silicon	mg/L	1.75
Silver	mg/L	< 0.000020
Strontium	mg/L	0.243
Sulphur	mg/L	4.4
Thallium	mg/L	< 0.000010
Tin	mg/L	< 0.0050
Titanium	mg/L	< 0.0050
Uranium	mg/L	< 0.00010
Vanadium	mg/L	< 0.0050
Zinc	mg/L	< 0.0050
Zirconium	mg/L	< 0.00010
Volatile Organics		
Benzene	mg/L	< 0.00020
Ethylbenzene	mg/L	< 0.00020
Toluene	mg/L	0.0034
Xylenes	mg/L	< 0.00040

m,p-Xylenes	mg/L	< 0.00040
o-Xylene	mg/L	< 0.00020
F1 (C6-C10)-BTEX	mg/L	< 0.025
F1 (C6-C10)	mg/L	< 0.025

MEL-18	Sample Date	9/3/2019
Parameter	Unit	
Field Measured		
pH	pH units	7.78
Conductivity	uS/cm	163.4
Temperature	°C	5.7
Dissolved oxygen	mg/L	13.06
Dissolved oxygen	%	104.6
Conventional Parameters		
pH	pH units	7.72
Specific conductivity	umhos/cm	160
Hardness, as CaCO ₃	mg/L	62.7
Hardness, Calcium Carbonate	mg/L	64.8
Total alkalinity, as CaCO ₃	mg/L	34
Total dissolved solids	mg/L	110
Total suspended solids	mg/L	1
Total organic carbon	mg/L	5.1
Dissolved organic carbon	mg/L	5.1
Turbidity	NTU	0.7
Major Ions		
Bicarbonate, as CaCO ₃	mg/L	34
Calcium	mg/L	20.8
Carbonate, as CaCO ₃	mg/L	< 1.0
Chloride	mg/L	22
Cyanide total	mg/L	< 0.0050
Cyanide Free	mg/L	< 0.0010
Cyanide WAD	mg/L	< 0.0010
Magnesium	mg/L	2.61
Potassium	mg/L	1.2
Sodium	mg/L	5.36
Sulphate	mg/L	7.4
Silica	mg/L	1.7
Nutrients and Chlorophyll a		
Nitrate	mg/L	< 0.10
Nitrite	mg/L	< 0.010
Nitrate + nitrite	mg/L	< 0.10
Total ammonia	mg/L	0.075
Total Kjeldahl nitrogen	mg/L	0.32
Total phosphorus	mg/L	< 0.020

Orthophosphate	mg/L	< 0.010
Total Metals		
Aluminum	mg/L	0.0117
Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.00176
Barium	mg/L	0.0177
Beryllium	mg/L	< 0.00010
Bismuth	mg/L	< 0.0010
Boron	mg/L	< 0.05
Cadmium	mg/L	< 0.000010
Calcium	mg/L	21.4
Chromium	mg/L	< 0.0010
Cobalt	mg/L	< 0.00020
Copper	mg/L	0.00096
Iron	mg/L	0.134
Lead	mg/L	< 0.00020
Lithium	mg/L	0.0077
Magnesium	mg/L	2.77
Manganese	mg/L	0.0103
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.0010
Nickel	mg/L	0.0011
Potassium	mg/L	1.3
Selenium	mg/L	< 0.00010
Silicon	mg/L	0.503
Silver	mg/L	< 0.000020
Sodium	mg/L	5.19
Strontium	mg/L	0.137
Sulphur	mg/L	< 3
Thallium	mg/L	< 0.000010
Tin	mg/L	< 0.0050
Titanium	mg/L	< 0.0050
Uranium	mg/L	< 0.00010
Vanadium	mg/L	< 0.0050
Zinc	mg/L	< 0.0050
Zirconium	mg/L	< 0.00010
Dissolved Metals		
Aluminum	mg/L	0.0036
Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.00127
Barium	mg/L	0.0168
Beryllium	mg/L	< 0.00010
Bismuth	mg/L	< 0.0010
Boron	mg/L	< 0.05
Cadmium	mg/L	< 0.000010

Chromium	mg/L	< 0.0010
Cobalt	mg/L	< 0.00020
Copper	mg/L	0.00091
Iron	mg/L	0.0415
Lead	mg/L	< 0.00020
Lithium	mg/L	0.0078
Manganese	mg/L	0.0038
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.0010
Nickel	mg/L	< 0.0010
Selenium	mg/L	< 0.00010
Silicon	mg/L	0.481
Silver	mg/L	< 0.000020
Strontium	mg/L	0.129
Sulphur	mg/L	< 3.0
Thallium	mg/L	< 0.000010
Tin	mg/L	< 0.0050
Titanium	mg/L	< 0.0050
Uranium	mg/L	< 0.00010
Vanadium	mg/L	< 0.0050
Zinc	mg/L	< 0.0050
Zirconium	mg/L	< 0.00010

MEL-20	Sample Date	9/1/2019
Parameter	Unit	
Field Measured		
pH	pH units	7.76
Conductivity	uS/cm	2540
Temperature	°C	3.9
Dissolved oxygen	mg/L	9.13
Dissolved oxygen	%	7
Conventional Parameters		
pH	pH units	7.65
Hardness, as CaCO ₃	mg/L	479
Hardness, Calcium Carbonate	mg/L	471
Total alkalinity, as CaCO ₃	mg/L	86
Total dissolved solids	mg/L	1570
Total suspended solids	mg/L	40
Turbidity	NTU	40
Major Ions		
Calcium	mg/L	120
Chloride	mg/L	510
Cyanide	mg/L	0.086
Fluoride	mg/L	0.16

Magnesium	mg/L	43.4
Potassium	mg/L	21.7
Sodium	mg/L	292
Sulphate	mg/L	310
Nutrients and Chlorophyll a		
Nitrate	mg/L	14.3
Nitrite	mg/L	0.282
Nitrate + nitrite	mg/L	14.6
Total ammonia	mg/L	8.4
Total phosphorus	mg/L	0.33
Orthophosphate	mg/L	0.16
Total Metals		
Aluminum	mg/L	1.16
Antimony	mg/L	< 0.0050
Arsenic	mg/L	0.129
Barium	mg/L	0.077
Beryllium	mg/L	< 0.0010
Bismuth	mg/L	< 0.01
Boron	mg/L	< 0.5
Cadmium	mg/L	< 0.00010
Calcium	mg/L	117
Chromium	mg/L	< 0.01
Cobalt	mg/L	0.0058
Copper	mg/L	0.012
Iron	mg/L	1.45
Lead	mg/L	0.0034
Lithium	mg/L	< 0.02
Magnesium	mg/L	43.4
Manganese	mg/L	0.388
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.01
Nickel	mg/L	0.029
Potassium	mg/L	21.7
Selenium	mg/L	< 0.0010
Silicon	mg/L	4.85
Silver	mg/L	< 0.00020
Sodium	mg/L	291
Strontium	mg/L	0.834
Sulphur	mg/L	111
Thallium	mg/L	< 0.00010
Tin	mg/L	< 0.05
Titanium	mg/L	0.056
Uranium	mg/L	0.0071
Vanadium	mg/L	< 0.05
Zinc	mg/L	< 0.05

Zirconium	mg/L	0.0013
Dissolved Metals		
Aluminum	mg/L	< 0.03
Antimony	mg/L	< 0.0050
Arsenic	mg/L	0.118
Barium	mg/L	0.062
Beryllium	mg/L	< 0.0010
Bismuth	mg/L	< 0.01
Boron	mg/L	< 0.5
Cadmium	mg/L	0.00012
Chromium	mg/L	0.014
Cobalt	mg/L	0.0056
Copper	mg/L	0.0101
Iron	mg/L	0.13
Lead	mg/L	< 0.0020
Lithium	mg/L	< 0.02
Manganese	mg/L	0.378
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.01
Nickel	mg/L	0.04
Selenium	mg/L	0.001
Silicon	mg/L	2.22
Silver	mg/L	< 0.00020
Strontium	mg/L	0.832
Sulphur	mg/L	110
Thallium	mg/L	< 0.00010
Tin	mg/L	< 0.05
Titanium	mg/L	< 0.05
Uranium	mg/L	0.0073
Vanadium	mg/L	< 0.05
Zinc	mg/L	< 0.05
Zirconium	mg/L	< 0.0010

MEL-21	Sample Date	9/4/2019
Parameter	Unit	
Field Measured		
pH	pH units	8.09
Conductivity	uS/cm	2313
Temperature	°C	5.2
Dissolved oxygen	mg/L	9.37
Dissolved oxygen	%	74.3
Conventional Parameters		
pH	pH units	8.03

Hardness, as CaCO ₃	mg/L	494
Hardness, Calcium Carbonate	mg/L	497
Total alkalinity, as CaCO ₃	mg/L	100
Total dissolved solids	mg/L	1500
Total suspended solids	mg/L	41
Turbidity	NTU	83
Major Ions		
Calcium	mg/L	127
Chloride	mg/L	480
Cyanide	mg/L	< 0.0050
Fluoride	mg/L	0.18
Magnesium	mg/L	43
Potassium	mg/L	19.1
Sodium	mg/L	253
Sulphate	mg/L	230
Nutrients and Chlorophyll a		
Nitrate	mg/L	1.94
Nitrite	mg/L	0.054
Nitrate + nitrite	mg/L	1.99
Total ammonia	mg/L	1.4
Total phosphorus	mg/L	< 0.10
Orthophosphate	mg/L	< 0.010
Total Metals		
Aluminum	mg/L	1.67
Antimony	mg/L	0.00367
Arsenic	mg/L	0.0202
Barium	mg/L	0.074
Beryllium	mg/L	< 0.00010
Bismuth	mg/L	< 0.0010
Boron	mg/L	0.565
Cadmium	mg/L	0.000127
Calcium	mg/L	128
Chromium	mg/L	0.0042
Cobalt	mg/L	0.00592
Copper	mg/L	0.00867
Iron	mg/L	2.46
Lead	mg/L	0.00228
Lithium	mg/L	0.0476
Magnesium	mg/L	43.2
Manganese	mg/L	0.23
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	0.0243
Nickel	mg/L	0.029
Potassium	mg/L	19.6
Selenium	mg/L	0.00045

Silicon	mg/L	6.6
Silver	mg/L	0.000027
Sodium	mg/L	247
Strontium	mg/L	0.857
Sulphur	mg/L	81.6
Thallium	mg/L	0.000033
Tin	mg/L	< 0.0050
Titanium	mg/L	0.0817
Uranium	mg/L	0.00821
Vanadium	mg/L	< 0.0050
Zinc	mg/L	0.0069
Zirconium	mg/L	0.00132
Dissolved Metals		
Aluminum	mg/L	0.0098
Antimony	mg/L	0.00392
Arsenic	mg/L	0.00864
Barium	mg/L	0.059
Beryllium	mg/L	< 0.00010
Bismuth	mg/L	< 0.0010
Boron	mg/L	0.607
Cadmium	mg/L	0.000038
Chromium	mg/L	< 0.0010
Cobalt	mg/L	0.00399
Copper	mg/L	0.00444
Iron	mg/L	0.0217
Lead	mg/L	< 0.00020
Lithium	mg/L	0.0481
Manganese	mg/L	0.194
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	0.0257
Nickel	mg/L	0.0235
Selenium	mg/L	0.00041
Silicon	mg/L	2.98
Silver	mg/L	< 0.000020
Strontium	mg/L	0.872
Sulphur	mg/L	83
Thallium	mg/L	0.000012
Tin	mg/L	< 0.0050
Titanium	mg/L	< 0.0050
Uranium	mg/L	0.00817
Vanadium	mg/L	< 0.0050
Zinc	mg/L	< 0.0050
Zirconium	mg/L	0.00039

MEL-22	Sample Date	9/3/2019
Parameter	Unit	
Field Measured		
pH	pH units	7.86
Conductivity	uS/cm	6880
Temperature	°C	5.4
Dissolved oxygen	mg/L	12.56
Dissolved oxygen	%	102
Conventional Parameters		
pH	pH units	7.67
Specific conductivity	umhos/cm	6600
Hardness, as CaCO ₃	mg/L	1650
Hardness, Calcium Carbonate	mg/L	1690
Total alkalinity, as CaCO ₃	mg/L	70
Total dissolved solids	mg/L	4290
Total suspended solids	mg/L	8
Total organic carbon	mg/L	17
Turbidity	NTU	4.5
Major Ions		
Calcium	mg/L	474
Chloride	mg/L	1900
Cyanide	mg/L	< 0.0050
Fluoride	mg/L	< 0.10
Magnesium	mg/L	113
Potassium	mg/L	41.9
Sodium	mg/L	683
Sulphate	mg/L	310
Nutrients and Chlorophyll a		
Nitrate	mg/L	22.4
Nitrite	mg/L	0.339
Nitrate + nitrite	mg/L	22.8
Total ammonia	mg/L	11
Total phosphorus	mg/L	< 0.040
Orthophosphate	mg/L	< 0.010
Total Metals		
Aluminum	mg/L	0.055
Antimony	mg/L	< 0.0025
Arsenic	mg/L	0.0038
Barium	mg/L	0.114
Beryllium	mg/L	< 0.00050
Bismuth	mg/L	< 0.0050
Boron	mg/L	0.367
Cadmium	mg/L	0.000164
Calcium	mg/L	484
Chromium	mg/L	< 0.0050

Cobalt	mg/L	0.002
Copper	mg/L	0.0049
Iron	mg/L	0.346
Lead	mg/L	< 0.0010
Lithium	mg/L	0.245
Magnesium	mg/L	116
Manganese	mg/L	0.104
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.0050
Nickel	mg/L	0.0234
Potassium	mg/L	43.1
Selenium	mg/L	< 0.00050
Silicon	mg/L	2.33
Silver	mg/L	< 0.00010
Sodium	mg/L	692
Strontium	mg/L	7.76
Sulphur	mg/L	119
Thallium	mg/L	0.000068
Tin	mg/L	< 0.025
Titanium	mg/L	< 0.025
Uranium	mg/L	0.00338
Vanadium	mg/L	< 0.025
Zinc	mg/L	< 0.025
Zirconium	mg/L	< 0.00050
Dissolved Metals		
Aluminum	mg/L	< 0.015
Antimony	mg/L	< 0.0025
Arsenic	mg/L	0.00256
Barium	mg/L	0.115
Beryllium	mg/L	< 0.00050
Bismuth	mg/L	< 0.0050
Boron	mg/L	0.395
Cadmium	mg/L	0.000162
Chromium	mg/L	< 0.0050
Cobalt	mg/L	0.0017
Copper	mg/L	0.004
Iron	mg/L	0.101
Lead	mg/L	< 0.0010
Lithium	mg/L	0.284
Manganese	mg/L	0.0916
Molybdenum	mg/L	< 0.0050
Nickel	mg/L	0.0226
Selenium	mg/L	< 0.00050
Silicon	mg/L	2.1
Silver	mg/L	< 0.00010

Strontium	mg/L	7.74
Sulphur	mg/L	121
Thallium	mg/L	0.000088
Tin	mg/L	< 0.025
Titanium	mg/L	< 0.025
Uranium	mg/L	0.00349
Vanadium	mg/L	< 0.025
Zinc	mg/L	< 0.025
Zirconium	mg/L	< 0.00050

MEL-23	Sample Date	9/3/2019
Parameter	Unit	
Field Measured		
pH	pH units	7.8
Conductivity	uS/cm	305.8
Temperature	°C	4.8
Dissolved oxygen	mg/L	13.82
Dissolved oxygen	%	107.8
Conventional Parameters		
pH	pH units	7.89
Hardness, as CaCO ₃	mg/L	93.6
Hardness, Calcium Carbonate	mg/L	89.5
Total alkalinity, as CaCO ₃	mg/L	45
Total dissolved solids	mg/L	225
Total suspended solids	mg/L	1
Turbidity	NTU	1
Major Ions		
Calcium	mg/L	26.7
Chloride	mg/L	57
Cyanide	mg/L	< 0.0050
Fluoride	mg/L	< 0.10
Magnesium	mg/L	6.51
Potassium	mg/L	2.09
Sodium	mg/L	22.9
Sulphate	mg/L	5.7
Nutrients and Chlorophyll a		
Nitrate	mg/L	< 0.10
Nitrite	mg/L	< 0.010
Nitrate + nitrite	mg/L	< 0.10
Total ammonia	mg/L	0.1
Total phosphorus	mg/L	< 0.020
Orthophosphate	mg/L	< 0.010
Total Metals		
Aluminum	mg/L	0.0141

Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.0017
Barium	mg/L	0.0234
Beryllium	mg/L	< 0.00010
Bismuth	mg/L	< 0.0010
Boron	mg/L	< 0.05
Cadmium	mg/L	< 0.000010
Calcium	mg/L	25.2
Chromium	mg/L	< 0.0010
Cobalt	mg/L	< 0.00020
Copper	mg/L	0.00099
Iron	mg/L	0.223
Lead	mg/L	< 0.00020
Lithium	mg/L	0.0035
Magnesium	mg/L	6.45
Manganese	mg/L	0.0057
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	0.0023
Nickel	mg/L	0.0018
Potassium	mg/L	2.16
Selenium	mg/L	< 0.00010
Silicon	mg/L	0.278
Silver	mg/L	< 0.000020
Sodium	mg/L	21.7
Strontium	mg/L	0.135
Sulphur	mg/L	3.53
Thallium	mg/L	< 0.000010
Tin	mg/L	< 0.0050
Titanium	mg/L	< 0.0050
Uranium	mg/L	< 0.00010
Vanadium	mg/L	< 0.0050
Zinc	mg/L	< 0.0050
Zirconium	mg/L	< 0.00010
Dissolved Metals		
Aluminum	mg/L	0.0052
Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.00151
Barium	mg/L	0.0235
Beryllium	mg/L	< 0.00010
Bismuth	mg/L	< 0.0010
Boron	mg/L	< 0.05
Cadmium	mg/L	< 0.000010
Chromium	mg/L	< 0.0010
Cobalt	mg/L	< 0.00020
Copper	mg/L	0.00088

Iron	mg/L	0.145
Lead	mg/L	< 0.00020
Lithium	mg/L	0.0037
Manganese	mg/L	0.0036
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	0.0025
Nickel	mg/L	0.0017
Selenium	mg/L	< 0.00010
Silicon	mg/L	0.275
Silver	mg/L	< 0.000020
Strontium	mg/L	0.135
Sulphur	mg/L	< 3.0
Thallium	mg/L	< 0.000010
Tin	mg/L	< 0.0050
Titanium	mg/L	< 0.0050
Uranium	mg/L	< 0.00010
Vanadium	mg/L	< 0.0050
Zinc	mg/L	< 0.0050
Zirconium	mg/L	< 0.00010

MEL-25	Sample Date	9/27/2019
Parameter	Unit	
Conventional Parameters		
pH	pH units	8.08
Conductivity	uS/cm	293.8
Temperature	°C	2.3
Dissolved oxygen	mg/L	11.15
Dissolved oxygen	%	81.3
Conventional Parameters		
pH	pH units	8.1
Total suspended solids	mg/L	2
Hardness, Calcium Carbonate	mg/L	86.7
Nutrients and Chlorophyll a		
Total ammonia	mg/L	< 0.050
General Organics		
Total oil and grease	mg/L	1.2
Total Metals		
Aluminum	mg/L	0.0926
Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.00079
Barium	mg/L	0.0156
Beryllium	mg/L	< 0.00010
Bismuth	mg/L	< 0.0010
Boron	mg/L	0.078

Cadmium	mg/L	< 0.000010
Calcium	mg/L	20.6
Chromium	mg/L	0.0013
Cobalt	mg/L	0.00026
Copper	mg/L	0.00163
Iron	mg/L	0.133
Lead	mg/L	< 0.00020
Lithium	mg/L	< 0.0020
Magnesium	mg/L	8.53
Manganese	mg/L	0.0025
Molybdenum	mg/L	0.0032
Nickel	mg/L	0.0035
Potassium	mg/L	8.11
Selenium	mg/L	0.00035
Silicon	mg/L	2.08
Silver	mg/L	< 0.000020
Sodium	mg/L	25.7
Strontium	mg/L	0.0993
Sulphur	mg/L	16.4
Thallium	mg/L	0.000013
Tin	mg/L	< 0.0050
Titanium	mg/L	< 0.0050
Uranium	mg/L	0.00066
Vanadium	mg/L	< 0.0050
Zinc	mg/L	< 0.0050
Zirconium	mg/L	< 0.00010
Volatile Organics		
Benzene	mg/L	< 0.00020
Ethylbenzene	mg/L	< 0.00020
Toluene	mg/L	< 0.00020
Xylenes	mg/L	< 0.00040
m,p-Xylenes	mg/L	< 0.00040
o-Xylene	mg/L	< 0.00020
F1 (C6-C10)-BTEX	mg/L	< 0.025
F1 (C6-C10)	mg/L	< 0.025
F2 (C10-C16)	mg/L	< 0.1
F3 (C16-C34)	mg/L	< 0.2
F4 (C34-C50)	mg/L	< 0.2
Reached baseline at C50	mg/L	YES

MEL-26	Sample Date	9/2/2019	9/9/2019	9/26/2019
Parameter	Unit			
Field Measured				
pH	pH units	7.21	7.65	6.5

Conductivity	uS/cm	30998	2438	22573
Temperature	°C	4.9	9.1	8.6
Dissolved oxygen	mg/L	8.29	-	-
Dissolved oxygen	%	75.6	79.7	85
Turbidity	NTU	-	-	0.63
Conventional Parameters				
pH	pH units	7.14	7.44	7.17
Specific conductivity	umhos/cm	30000	23000	22000
Dissolved Oxygen	mg/L	9.48	10.2	9.76
Hardness, Dissolved	mg/L	5370	4010	4170
Hardness, Total	mg/L	5510	3890	3970
Total alkalinity, as CaCO ₃	mg/L	32	64	37
Total dissolved solids	mg/L	19500	15300	22000
Total suspended solids	mg/L	9	11	12
Volatile TSS	mg/L	6	-	-
Total organic carbon	mg/L	16	19	22
Dissolved organic carbon	mg/L	16	18	21
Turbidity	NTU	0.4	0.3	0.4
Major Ions				
Bicarbonate, as CaCO ₃	mg/L	32	64	37
Calcium	mg/L	967	856	930
Carbonate, as CaCO ₃	mg/L	< 1.0	< 1.0	< 1.0
Chloride	mg/L	10000	8500	7000
Chlorine, free	mg/L	9	0.5	-
Cyanide total	mg/L	0.0084	0.0072	0.069
Cyanide Free	mg/L	< 0.0010	< 0.0010	0.018
Cyanide WAD	mg/L	0.0021	0.0022	0.0087
Magnesium	mg/L	718	454	420
Potassium	mg/L	188	139	140
Sodium	mg/L	5150	3530	3200
Sulphate	mg/L	1000	820	830
Silica	mg/L	13	8	4.5
Sodium Adsorption Ratio	-	-	-	22
Nutrients and Chlorophyll a				
Nitrate	mg/L	53.3	48.7	48.9
Nitrite	mg/L	< 0.010	< 0.010	0.672
Nitrate + nitrite	mg/L	53.3	48.7	49.6
Total ammonia	mg/L	7	6	18
Total Kjeldahl nitrogen	mg/L	18	16	29
Total phosphorus	mg/L	0.076	0.071	0.062
Orthophosphate	mg/L	0.011	0.017	< 0.010
Total Metals				
Aluminum	mg/L	0.223	0.31	0.178
Antimony	mg/L	< 0.025	< 0.0050	< 0.0050
Arsenic	mg/L	0.0091	0.0107	0.0047

Barium	mg/L	0.192	0.182	0.223
Beryllium	mg/L	< 0.0050	< 0.0010	< 0.0010
Bismuth	mg/L	< 0.05	< 0.01	< 0.01
Boron	mg/L	< 2.5	0.584	0.574
Cadmium	mg/L	< 0.00050	0.00013	0.00013
Calcium	mg/L	974	832	920
Chromium	mg/L	< 0.05	< 0.01	< 0.01
Cobalt	mg/L	< 0.01	0.004	0.0051
Copper	mg/L	< 0.025	< 0.0050	< 0.0050
Iron	mg/L	< 0.5	< 0.1	< 0.1
Lead	mg/L	< 0.01	0.0022	0.0025
Lithium	mg/L	0.555	0.415	0.466
Magnesium	mg/L	747	441	406
Manganese	mg/L	< 0.05	0.046	0.219
Mercury	mg/L	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	< 0.05	0.014	< 0.01
Nickel	mg/L	< 0.05	0.022	0.031
Potassium	mg/L	188	136	130
Selenium	mg/L	< 0.0050	< 0.0010	0.0011
Silicon	mg/L	< 5	1.32	2.63
Silver	mg/L	< 0.0010	< 0.00020	< 0.00020
Sodium	mg/L	5090	3380	3010
Strontium	mg/L	23.6	20.1	19.8
Sulphur	mg/L	448	308	313
Thallium	mg/L	< 0.00050	0.0001	0.00011
Tin	mg/L	< 0.25	< 0.05	< 0.05
Titanium	mg/L	< 0.25	< 0.05	< 0.05
Uranium	mg/L	< 0.0050	0.0047	0.0038
Vanadium	mg/L	< 0.25	< 0.05	< 0.05
Zinc	mg/L	< 0.25	< 0.05	< 0.05
Zirconium	mg/L	< 0.0050	< 0.0010	< 0.0010
Dissolved Metals				
Aluminum	mg/L	< 0.15	0.166	0.111
Antimony	mg/L	< 0.025	< 0.0050	< 0.0050
Arsenic	mg/L	0.009	0.0137	0.005
Barium	mg/L	0.191	0.187	0.226
Beryllium	mg/L	< 0.0050	< 0.0010	< 0.0010
Bismuth	mg/L	< 0.05	< 0.01	< 0.01
Boron	mg/L	< 2.5	0.639	0.803
Cadmium	mg/L	< 0.00050	0.00013	0.00017
Chromium	mg/L	< 0.05	< 0.01	< 0.01
Cobalt	mg/L	< 0.01	0.0041	0.0055
Copper	mg/L	< 0.01	0.004	0.0049
Iron	mg/L	< 0.25	< 0.05	< 0.05
Lead	mg/L	< 0.01	0.0022	0.0027

Lithium	mg/L	0.539	0.428	0.477
Manganese	mg/L	< 0.05	0.042	0.223
Mercury	mg/L	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	< 0.05	0.017	0.013
Nickel	mg/L	< 0.05	0.022	0.032
Selenium	mg/L	< 0.0050	< 0.0010	0.0013
Silicon	mg/L	< 5	1.36	2.6
Silver	mg/L	< 0.0010	< 0.00020	< 0.00020
Strontium	mg/L	23.5	20.8	19.9
Sulphur	mg/L	437	320	332
Thallium	mg/L	< 0.00050	0.0001	0.00012
Tin	mg/L	< 0.25	< 0.05	< 0.05
Titanium	mg/L	< 0.25	< 0.05	< 0.05
Uranium	mg/L	< 0.0050	0.0048	0.0042
Vanadium	mg/L	< 0.25	< 0.05	< 0.05
Zinc	mg/L	< 0.25	< 0.05	< 0.05
Zirconium	mg/L	< 0.0050	< 0.0010	< 0.0010
Radionuclides				
Radium-226	Bq/l	0.07	0.13	0.1

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 August 15th, the landfill contained approximately 14 610 m³ of material.

In September 2019, approximately 1m³ of contaminated soil was transferred to the Type A Landfarm as a result of minor spills cleanup.

3.2 ORE

Approximately 91,007 tonnes of ore were processed through the Mill in September.

3.3 WASTE ROCK STORAGE FACILITY

In September, a total of 28,336 tonnes of waste rock was removed in the mine development process. No material was used as underground dry rockfill. No waste was stockpiled for progressive closure cover.

3.4 TAILINGS

56,490 dry tonnes of filtered tailings were sent to the Tailing Storage Facility in September 2019. 34,517 tonnes of tailings were used for paste underground backfill

SECTION 4 SPILL MANAGEMENT

4.1 INTERNAL AND REPORTABLE SPILLS

All spills reported internally (6) are listed in the table 4.1 below 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.

3 reportable spills occurred in September and are highlighted in the table below

Table 4.1: Summary of Agnico's Spill Reports in September 2019

Date and time of occurrence	material	Quantity (l)	Location	Description of incident	Describe immediate corrective actions
9/2/2019 6:30	hydraulic oil	15.00	On the road between MSB and P2	Travelling between Portal 2 and MSB at the end of the shift a hydraulic hose busted.	Picked up the contaminated material and brought it to the landfarm
9/5/2019 13:30	coolant	20.00	surface portal 2	Coolant hose broke and caused leak	Employee immediately placed spill pads below the leak and called the mechanic
9/7/2019 21:30	Fuel		Near Orbit garage	While fueling 988k loader spill occurred while fueling. over flow occurred and fuel spilt on the ground.	Temporary set up for fueling. wiggig connection will be used once new fueling location is erected.
9/8/2019 0:30	Oil	1.00	Outside wall, west side of powerhouse, Gen #4	Oil mist separator has failed overnight on generator #4 and oil has reached outside.	Switched generator and cleaned the spill.
9/11/2019 15:30	hydraulic oil	40.00	East Side of MSB	After performing walk around inspection operator started equipment. hose blew causing spill	Stopped equipment. reported to supervisor and contact maintenance.

9/12/2019 1:00	hydraulic oil	5.00	Drill #3 Sh-77	Spill coming from a hydraulic fitting on the rod handler's cylinder that's on top of the drill. It turns out it wasn't the right fitting installed and it leaked.	-Fitting was replaced and oil leak-Spill cleaned-up. -Drift pan on the side of the drill fully emptied and cleaned. (see added photos)-All hazmat material and waste were disposed properly.
9/13/2019 7:30	Treated water with high TDS	11,131 m3	Final Discharge Point MEL-14	A sample of treated water from Mel-14 (final discharge point to Meliadine Lake) was collected September 13th 2019. The results for the TDS were received on September 25th and were found to be 1430 mg/L which exceeded the permitted discharge limit of 1400 mg/L. Another sample was taken September 12th with all MDMER parameters and all results including TDS were below the Licence criteria. The volume reported (11,131 cubic meters) is the total volume of water discharged that day, as we are unable to determine the exact quantity released at this exceedance concentration.	Samples taken the day prior to this exceedance were below the licence criteria limit. We are still waiting results from subsequent samples.

9/14/2019 13:30	Process water	8 m3	63° 2'13.63"N, 92°13'33.84"W	During start-up of the cyclone system, a blockage occurred preventing slurry and water from passing through the cyclone unit. The system backed up and process water overflowed to the floor of the process plant. Approximately 8 cubic meters flowed outside the building, onto the industrial pad.	Ensure the operator regularly checks the cyclones.
9/28/2019 12:00	Copper Sulphate	40.00	Process Plant North Side	While emptying a sea-can containing large bags of copper sulphate, one of the bags was ripped and material spilled onto the sea-can floor. The operator patched the hole and while removing the remaining pallets, the high winds blew a lot of material outside onto the pad.	Once the sea-can had been emptied, the operator removed all of the loose chemical (powder) and scraped up the contaminated snow/gravel outside the sea-can. The spilled and contaminated material was disposed of through the mill.