AGNICO EAGLE
MELIADINE

Meliadine Gold Project
NWB 2BB-MEL1424
May 2019 Monthly Report

Prepared for:
Nunavut Water Board

Prepared by:
Agnico Eagle Mines Limited – Meliadine Division

June 28th, 2019

This monthly report is delivered under water license 2BB-MEL1424, PART J, Item 13.

1. The Licensee shall maintain Monitoring Stations at the following locations:

Table 1: Monitoring stations

Monitoring Station	Description	Status
MEL-1	Raw water supply intake at Meliadine Lake	Active (Volume m^3)
MEL-2	Raw water supply intake at Pump, A8 or other Lakes	Active (Volume m^3)
MEL-5	Point of discharge for the Bermed Fuel Containment Facilities	Inactive
MEL-6	Effluent from the Landfarm Treatment Facility prior to release	Inactive
MEL-7	Final Effluent Discharge from the BIODISK treatment system	Active (no direct discharge)
MEL-8	Point of discharge or runoff from the Non-Hazardous Waste landfill	Inactive

2. The Licensee shall measure and record, in cubic metres, the daily quantities of water utilized for camp, drilling and other purposes from all sources.

Table 2: Water quantities utilized (average)

MEL-1[1]	Camp	m^3/day	21.27
	Pump Shack	m^3/day	3.87
	Construction	m^3/day	0.00
MEL-2 (A8)[2]	Underground	m^3/day	0.00
	Drilling	m^3/day	17.45
Not MEL-1 or MEL-2	Drilling	m^3/day	37.10
Daily Average		m^3/day	79.43
Total May 2019		m^3	2,462
Total 2019		m^3	10,241

3. The Licensee shall measure and record the volume of all soil from all locations entering the Landfarm Treatment Facility.

In May 2019, no material was deposited in the Type B landfarm. Any new contaminated soil generated will be deposited in the Landfarm approved in the Type A Water License.

[1] MEL-1: 541943E, 6989174N
[2] MEL-2 (A8): 540076E, 6987731N

4. ***The Licensee shall assess and record the concentration of F1 – F4 fractions in petroleum hydrocarbon contaminated soil, according to the CCME Canada-Wide Standard for Petroleum Hydrocarbons (PHC) in Soil that is entering the Land Treatment Unit from all sources and excavations.***

   No contaminated soil was deposited in May, 2019 therefore no samples were taken.

5. ***The Licensee shall provide the GPS coordinates (in decimal degrees) of all locations where wastes associated with camp operations and exploration activities are deposited.***

   No more waste from camp operations and exploration is deposited in locations related to Licence 2BB-MEL1424

6. ***Licensee shall sample at Monitoring Program Station MEL-7, monthly during wastewater effluent discharge. Samples shall be analyzed for the parameters listed under Part D Item 11:***
   pH
   Biochemical Oxygen Demand – BOD5
   Total Suspended Solids (TSS)
   Fecal Coliforms
   Oil and Grease (and visual)

   From Nov, 2017 to April 2019, all treated sewage from the Exploration Camp STP was trucked and deposited in CP1. Since April 15th 2019, due to inconsistency in the amount of people at the exploration camp resulting in unsteady STP effluent results, AEM decided to transfer all treated water from the exploration STP to the main camp STP for a second treatment before being discharge in CP-1. Therefore, discharge limits don't apply to MEL-7 results. Agnico continued to monitor the quality of the effluent; 6 samples were collected during the month. The summary of the results is provided in Table 4 below.

Table 4: Effluent testing results at STP-FINAL (MEL-7) sampling station, May 2019

MEL-7		**Sample Date**	5/6/2019	5/13/2019	5/14/2019	5/16/2019	5/21/2019	5/27/2019
Parameters	**MEL-7 EFFLUENT QUALITY LIMITS**	**Units**						
Aerobic heterotrophic bacteria		CFU/100mL	2500	700	5600	510	57000	200
Atypical colonies		CFU/100mL	4900	3900	9400	99	1020	490
Biochemical Oxygen Demand, 5 Day	80	mg/L	< 2	2	3	< 2	< 2	< 2

Fecal Coliform		CFU/100mL	< 2	< 2	4	< 2	< 2	< 2
Oil & Grease, Total Rec	5	mg/L	4.8	1.4	< 0.50	< 0.50	1.6	0.80
pH	6.0 - 9.5	pH units	7.25	7.19	6.99	7.14	7.24	7.12
Total Coliform		CFU/100mL	< 100	< 100	< 100	< 10	< 10	< 10
Total Suspended Solids	100	mg/L	2	< 1	1	2	< 1	1

7. ***The Licensee shall, prior to the release of effluent from the Bermed Fuel Containment Facilities at Monitoring Program Station MEL-5 and the Landfarm Treatment Facility at Monitoring Program Station MEL-6 for the purpose of demonstrating compliance, sample for the parameters listed under Part D item 15.***

   In May, no water was discharged from the Fuel Containment Facilities (Monitoring station MEL-5) or the Landfarm Treatment Facility (Monitoring Station MEL-6).

8. ***The Licensee shall obtain representative samples of the water column below any ice where required under part F, Items 5 and 6. Monitoring shall include but not limited to the following:***

   Total Suspended Solids
   pH
   Electrical Conductivity, and
   Total trace Metals as determined by a standard ICP Scan (to include at a minimum, the following elements: Al, Sb, Ba, Be, Cd, Cr, Co, Cu, Fe, Pb, Li, Mn, Mo, Ni, Se, Sn, Sr, Tl, Ti, U, V, Zn), and Trace Arsenic and Mercury.

   On-ice drilling was conducted in March and April 2019; samples are collected before, during and after drilling and sent for analysis. The complete set of analyses results are presented at page 6.

9. ***Modify the monthly monitoring reports, starting April 2016, to include, at a minimum, waste water treatment options; and modifications of the freshet action plan.***

   From Nov, 2017 to April 2019, all treated sewage from the Exploration Camp STP was trucked and deposited in CP1. Since April 15th 2019, due to inconsistency in the amount of people at the exploration camp resulting in unsteady STP effluent results, AEM decided to transfer all treated water from the exploration STP to the main camp STP for a second treatment before being discharge in CP-1. Previously the effluent from this system was

discharged directly into Meliadine Lake. The Freshet Action Plan has been revised and submitted with the Annual Report in accordance with the Water License.

	Sample Date	3/2/2019	3/16/2019	3/19/2019	3/16/2019	5/11/2019	4/12/2019	4/16/2019
	Location	J01-001-BEFORE	J01-001-DURING	J01-001-AFTER	A01-002-BEFORE	A01-002-AFTER	MEL LAKE-001-BEFORE	MEL-LAKE-001-AFTER
Parameters	Units							
WQTC02-Conventional Parameters								
pH	N/A	7.36	7.14	7.2	7.1	7.07	6.68	6.63
Specific conductivity	umhos/cm	-	1085	-	1016	1316	347	347
Hardness	mg CaCO3/L	331	576	384	587	816	108	96
Total suspended solids	mg/L	35	7	11	9	17	12	8
Turbidity	NTU	19.9	15.5	-	10.5	3.66	13.4	3.43
WQTC03-Major Ions								
Chloride	mg/L	113	164	167	187	175	51.0	52.2
Sulphate	mg/L	34.5	49.3	52.7	55.0	-	15.0	13.9
WQTC06-Total Metals								
Aluminum	mg/L	0.221	0.070	0.049	0.070	< 0.005	0.153	0.083
Antimony	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Arsenic	mg/L	0.0028	0.0063	0.0051	0.0068	0.0048	0.0062	0.0027
Barium	mg/L	0.0746	0.1139	0.1038	0.1368	0.1779	0.0476	0.0441
Beryllium	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Boron	mg/L	< 0.01	0.14	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	mg/L	< 0.00002	0.00002	< 0.00002	0.00013	< 0.00002	< 0.00002	< 0.00002
Calcium	mg/L	102	160	99.4	190	273	27.4	33.2
Chromium	mg/L	0.0025	0.0037	0.0039	0.0033	0.0008	0.0223	0.0029
Cobalt	mg/L	0.0007	0.0027	0.0019	0.0011	0.0011	0.0017	< 0.0005
Copper	mg/L	0.0284	0.0228	0.0084	0.0076	0.0013	0.0181	0.0046
Iron	mg/L	1.14	2.78	2.24	2.48	0.09	2.98	0.65
Lead	mg/L	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	0.0008	< 0.0003
Lithium	mg/L	0.017	0.018	0.011	0.019	0.027	< 0.005	< 0.005
Magnesium	mg/L	18.8	42.6	33.3	27.7	32.8	8.23	4.97
Manganese	mg/L	0.1381	0.7340	0.6437	0.6767	0.8638	0.6892	0.2774
Mercury	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	< 0.0005	0.0032	0.0024	0.0005	< 0.0005	< 0.0005	< 0.0005
Nickel	mg/L	0.0074	0.0165	0.0137	0.0099	0.0078	0.0224	0.0057
Potassium	mg/L	9.64	20.1	15.6	10.9	10.7	7.99	3.65
Selenium	mg/L	0.0007	< 0.0005	< 0.0005	0.0026	< 0.0005	< 0.0005	0.0006
Silver	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Sodium	mg/L	64.8	152	116	63.5	66.2	39.9	21.2
Strontium	mg/kg	0.476	0.719	0.709	0.708	1.06	0.181	0.174
Thallium	mg/L	0.0025	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Tin	mg/kg	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Titanium	mg/L	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Uranium	mg/L	0.001	0.002	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	mg/L	0.0012	< 0.0005	< 0.0005	0.0005	0.0088	0.0005	< 0.0005
Zinc	mg/L	0.014	0.132	< 0.001	0.014	0.023	0.193	0.044

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected above equipment analytical range.

- Chemical not analyzed or criteria not defined.