



# **AGNICO EAGLE**

## **MELIADINE GOLD PROJECT**

**ENVIRONMENTAL REPORT: OCTOBER 2016**

**WATER LICENCE 2BB-MEL1424**

**SUBMITTED TO THE NUNAVUT WATER BOARD**

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**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 Program Station Number	Description	Status
MEL-1	Raw water supply intake at Meliadine Lake	Active (Volume cubic metres)
MEL-2	Raw water supply intake at Pump, A8 or other Lakes	Active (Volume cubic metres)
MEL-5	Point of discharge for the Bermed Fuel Containment Facilities	Active
MEL-6	Effluent from the Landfarm Treatment Facility prior to release	New
MEL-7	Final Effluent Discharge from the BIODISK treatment system	Active
MEL-8	Point of discharge or runoff from the Non-Hazardous Waste Landfill	(New) Active

- 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.**

The daily average consumption of fresh water for the site was 43.38 m<sup>3</sup>/day for the month of October; 4.32 m<sup>3</sup>/day for the drilling, 35.70 m<sup>3</sup>/day<sup>\*\*\*</sup> for the camp and 2.55 m<sup>3</sup>/day for the underground, as well 0.81 m<sup>3</sup>/day were used for construction.

\*\*\* The volume includes the indirect water use.

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

589 m<sup>3</sup> of soil entered in October.

- 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.**

Soil samples were taken on September 25, 2016 as per Part D Item 19 prior to removal from the Landfarm Facility. A report summarizing results will be prepared in December.

- 5. The Licensee shall provide the GPS coordinates of all locations where sources of water are utilized for all purposes. In UTM NAD 1983 zone 15.**

- Camp and construction water sources: East 541943.0 ; North 6989174.0
- Underground water source: East 540076.0 ; North 6987731.0

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

The landfill has not been constructed yet, so most of the waste continues to be managed in containers. These containers are transported by barge during the summer and disposed of in an approved southern facility.

- 7. Licensee shall sample at Monitoring Program Station MEL-7, monthly during wastewater effluent discharge. Samples shall be analyzed for the parameters listed under Part G Item 11.**

**Biochemical Oxygen Demand – BOD5**

**Total Suspended Solids**

**Oil and Grease (and visual)**

**Fecal Coliforms**

**pH**

All sewage treatment units are running correctly; population average was 220 persons.

No exceedances were measured in the month of October.

Station: STP-FINAL		October				
DATE	Limits	10/3/2016	10/12/2016	10/17/2016	10/24/2016	10/31/2016
Ammonia as N (mg/L)		22.0	18.0	20.0	28.0	44.0
Biochemical Oxygen Demand	80	21.0	17.0	28.0	21.0	13.0
Kjeldahl nitrogen		23.0	22.0	23.0	Missed by the lab	47.0
pH	6.0 - 9.5	7.23	6.90	7.22	7.20	7.28
Phosphorus (P)-Total		11.0	12.0	13.0	13.0	14.0
Total Suspended Solids	100	3.0	6.0	2.0	4.0	4.0
Transmittance %		37.0	33.0	39.0	27.0	34.0
Nitrite-N		7.98	1.43	2.45	1.73	3.46
Nitrate-N		18.9	21.8	19.1	17.3	16.3
Nitrate and Nitrite as N		26.90	23.20	21.60	19.10	19.80
Oil & Grease-(IR)	5	<0.50	1.1	0.8	<0.50	<0.50
Fecal Coliforms (CFU/100mL)	1000	2.0	64.0	4.0	4.0	2.0
Heterotrophic Plate Count (AAHB) (CFU/100mL)		21,800.0	>57000	24,400.0	17,400.0	22,400.0
Total Coliforms (CFU/100mL)		<100	NDOGT	2,000.0	1,400.0	200.0
NDOGT: No data.						

8. *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 October, no water was released from MEL-6 or MEL-5.

9. *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*

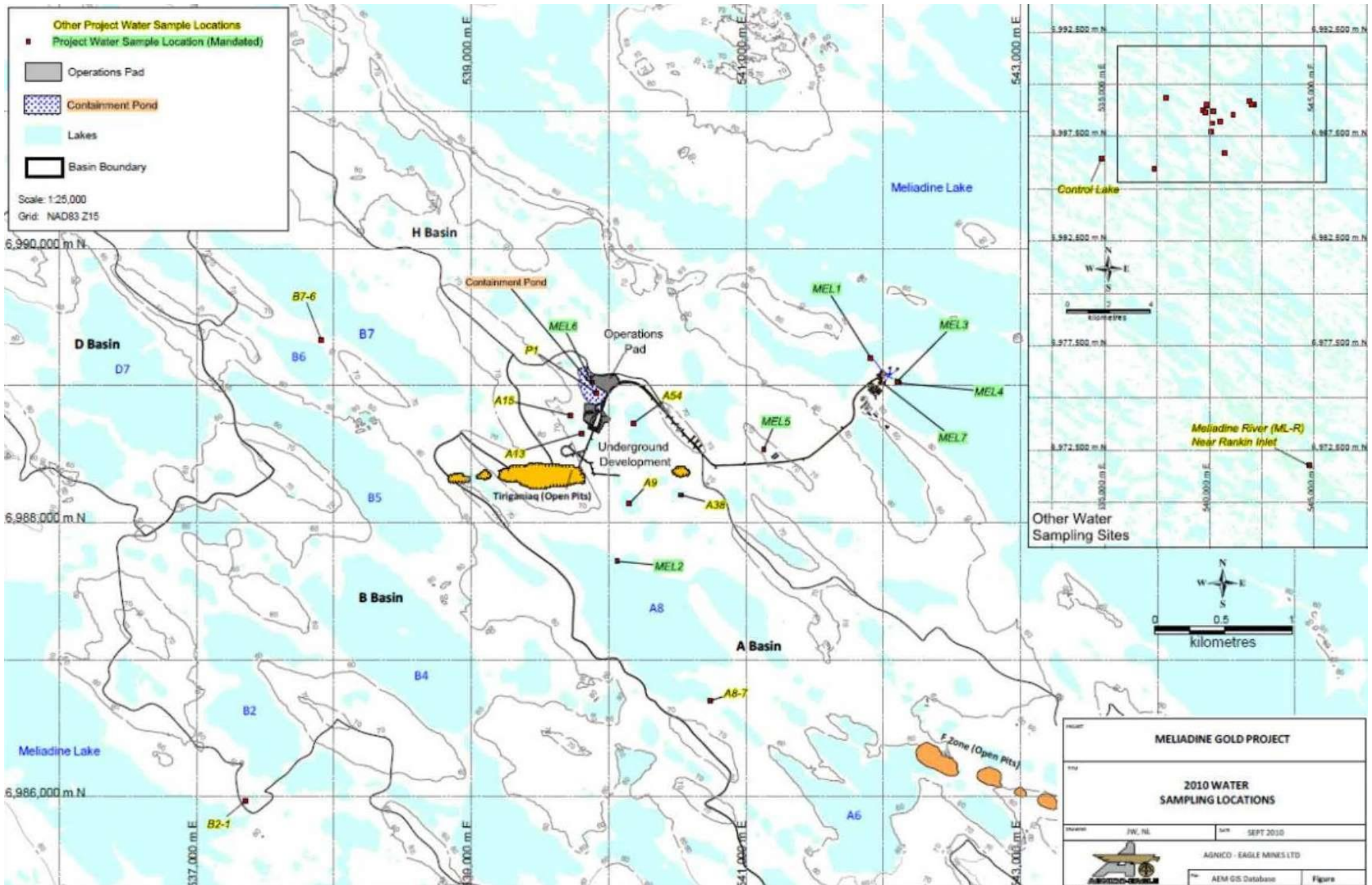
*Total trace Metals as determined by a standard ICP Scan (to include at a minimum, the following elements: Al, Sb, Ba, Be, Cd, Cr, Co, Cu, Fe, Pb, Li, Mn, Mo, Ni, Se, Sn, Sr, Tl, Ti, U, V, Zn), and Trace Arsenic and Mercury.*

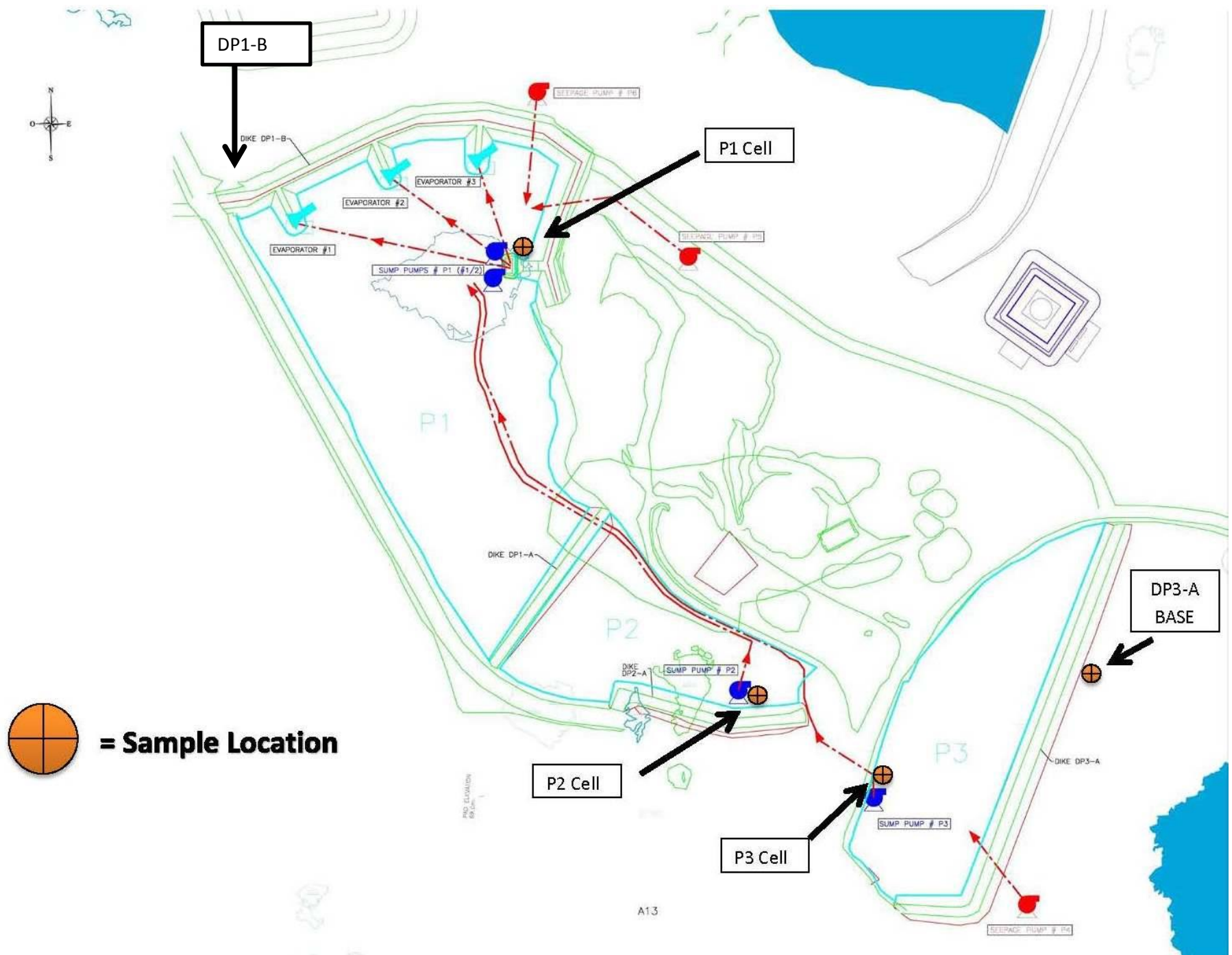
➤ No drilling was done in October on any lake.

**As per Section 2 of INAC Water License Inspection Dated April 12, 2016:**

***III. Amend the 2BB-MEL1424 monitoring program to include, at a minimum, a regular compliance point at DP3-A and A54.***

➤ See maps below for sample locations. A54 is taken at the same location as in past years.





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

***Waste water treatment options:*** Water contained in P3 and P2 was pumped to P1 in 2016. Daily inspections were completed by environmental technicians. Evaporators were in operation until September 17. They were winterized afterwards.

Regular inspections took place to check on direction of evaporation curtain to ensure the evaporation curtain is remaining inside the P1 containment area.

In October, underground water was pumped to P2 and Saline Pond.

***Modifications of the freshet action plan:*** Currently no modifications to the freshet action plan are noted.

***Seep:*** In the month of July a seep was noted at the toe of the DP1-B berm. Immediately a sump was dug to catch the seep and a pump was installed to pump the seep water back into the P1 containment. During freshet 2017, Agnico Eagle will assess seepage rate as requested by INAC Inspector on November 10, 2016.

In the month of June a seep was noted at the toe of the DP3-A berm. Immediately a sump was dug to catch the seep and a pump was installed to pump the seep water back into the P3 containment. During freshet 2017, Agnico Eagle will assess seepage rate as requested by INAC Inspector on November 10, 2016.