AGNICO-EAGLE

6 April 2011

Ms. Phyllis Beaulieu
Licencing Coordinator
Nunavut Water Board
P.O. Box 119
Gjoa Haven
NU, X0B1J0

Re: **Water License 2BB-MEL0914: Meliadine Gold Project: Effluent Quality Discharge Criteria and Repair of Leak at Culvert**

Dear Ms. Beaulieu,

On January 6, 2011, the Nunavut Water Board approved Agnico-Eagle Mines Limited's application to extend the underground exploration and bulk sample program. The following two clauses were added to the licence at that time.

> ***PART D: CONDITIONS APPLYING TO WASTE DISPOSAL***
>
> *21. The Licensee shall submit to the Board for approval, at least sixty (60) days prior to the discharge of Effluent from the primary containment area and/or portal sump, proposed Effluent quality discharge criteria taking into consideration the comments made by Environment Canada during the review of the Amendment application to expand underground bulk sampling.*
>
> *22. The Licensee shall submit to the Board and Inspector, within (90) days of the amendment issuance, a work plan along with a timeframe for repairing the failure in the liner of the operations pad primary containment sump.*

Addressing clause 21 first, it is believed that the portal sump drains into the primary containment area as no water is evidenced at the toe of the road downstream of this sump. Water samples have been collected from the primary containment area, station P1, since May 2008 and the most recent data is summarized in the table below. I have highlighted the median values that exceed the Canadian Environmental Quality Guidelines for freshwater aquatic life.

P1	CEQG[1]	MMER[2]	Jul-09	Aug-09	Jun-10	Jul-10	Aug-10	Sep-10	median
pH	6.5 - 9.0	6.0 -9.5	7.98	7.99	7.98	7.54	7.59	7.66	7.82
Al	0.1		<0.040	<0.040	0.018	<0.002	0.006	<0.002	0.012
As	0.005	0.5	0.0139	0.0114	0.0067	0.0216	0.0023	0.0012	0.009
Cd	0.000017		<0.00020	<0.00020	<0.00005	<0.0008	<0.00008	0.00028	0.00020
Cu	0.004	0.3	0.0081	<0.0040	0.0013	0.011	0.0022	0.0043	0.0042
Cr	0.001		<0.0050	<0.0050	<0.0050	<0.0006	<0.0006		0.005
Fe	0.3		0.0093	0.051	0.064	<0.001	<0.01	1.3	0.031
Pb	0.007	0.2	0.00064	<0.0004	0.00015	<0.0003	0.0029	<0.0003	0.0004
Ni	0.15	0.5	0.0072	0.007	0.003	0.007	0.011	0.0368	0.007
Zn	0.03	0.5	0.018	<0.016	<0.0040	<0.001	0.004	0.015	0.0095
NH_3	variable		11.6	7.1	1.07	0.08	2.9	2.0	2.45
NO_3	2.9		9.58	4.08	1.54	0.04	6.5	1.0	2.81
NO_2	0.06		0.131	<0.05	<0.05	<0.01		0.05	0.05

[1]Canadian Environmental Quality Guidelines for freshwater aquatic life
[2]Metal Mining Effluent Regulations

Lake A54 is the first receiving water body downstream of the primary containment area and water samples have been collected since June 2009. Again median values above the guidelines for freshwater aquatic life are highlighted.

A54	CEQG	MMER	Jun-09	Jul-09	Aug-09	Jun-10	Jul-10	Aug-10	Sep-10	median
pH	6.5 - 9.0	6.0 -9.5	7.84	7.87	7.7	7.97	8.24	7.72	7.72	7.84
Al	0.1		<0.040	<0.040	<0.040	0.044	<0.002	<0.002	<0.002	0.04400
As	0.005	0.5	0.0033	0.0034	0.0037	0.00323	0.0044	0.0017	0.0035	0.00340
Cd	0.000017		<0.00020	<0.00020	<0.00020	<0.000050	<0.00008	<0.00008	0.00012	0.00012
Cu	0.004	0.3	<0.0040	<0.0040	<0.0040	0.0014	0.0021	0.0015	0.002	0.00175
Cr	0.001		<0.0050	<0.0050	<0.0050	<0.0050	<0.0006	<0.0006		<0.00500
Fe	0.3		0.081	0.02	<0.029	0.0107	<0.01	<0.01	0.71	0.05050
Pb	0.007	0.2	<0.00040	<0.00040	<0.00040	0.0002	<0.0003	<0.0003	0.0019	0.00105
Ni	0.15	0.5	0.0037	0.0032	0.0047	0.0033	0.0048	0.0064	0.0134	0.00470
Zn	0.03	0.5	0.03	<0.016	<0.016	<0.0040	<0.001	0.001	0.011	0.01100
NH_3	variable		4.56	0.39	0.544	0.74	<0.05	0.25	0.13	0.544
NO_3	2.9		6.73	5.74	5.57	1.25	1.4	0.82	0.11	3.485
NO_2	0.06		0.069	0.122	<0.05	<0.05	0.05		0.01	0.069

The data for the two sampling locations show that both trace metals and nutrients continue to fall in concentration over time.

Further data is presented for As at the end of this letter as well as a figure showing the sampling locations. Data collected downstream of the pad area before its construction has a median of 0.002 mg/L. Following construction, the median is 0.003 mg/L. To date, the data shows that there has not been a significant increase in As following construction of the pad using waste rock and it supports the statement made by Golder in the static geochemistry report on the waste rock and ore:

"…exceedances of water quality guidelines in leachates from laboratory tests do not necessarily imply non-compliance of mine site contact water quality because the latter depends on a number of site-specific factors that are not reproducible in laboratory tests. The results to date underline, however, the propensity of the waste rock to release arsenic at concentrations that warrant mine waste management planning, including the following, to minimize negative environmental effects:

- *Monitoring of arsenic concentrations in waste rock during mine development and operation; and,*

- *Mine site water management, including prevention of contact water, water quality monitoring and contingency mitigative measures."*

AEM will continue its water quality monitoring program in 2011 as well expand the analysis of waste rock. Additional data will be useful in the future determination of water quality objectives and effluent criteria. In its comments Environment Canada suggested site specific water quality guidelines be developed while the NWB requested effluent quality discharge criteria. The two are quite different.

In regards to effluent quality discharge criteria, AEM feels more data is necessary before suggesting these. The area surrounding the Meliadine Gold Project has naturally elevated As concentrations. It is high in the till, waste rock, ore and on occasion above the CEQG in natural waters distant from development. Arsenic is thus a major parameter of concern and it needs to be thoroughly evaluated before making any recommendations. More data will better show trends, something not possible with the limited data collected so far. For the interim AEM feels the Metal Mining Effluent Regulations are best suited for effluent quality discharge criteria for receiving waters from the primary containment area.

The available water quality data is again insufficient to derive site-adapted water quality objectives Once sufficient data has been collected, AEM will be in better position to propose a site-adapted water quality objective for As using the methods suggested by Environment Canada. But before calculating the objective, AEM would want to discuss with Environment Canada on how these objectives would be used. That is unclear at present.

In response to clause 22, the work plan for dealing with water leaking under the culvert leading from the primary containment is as follows:

1. The work will be done in April-May 2011,
2. Remove the snow from the front of the culvert,
3. Backfill the area in front and around the culvert so that the entrance is totally covered,
4. Compact the fill to seal the entrance to the culvert,
5. At first melt, take a water sample and send it for analysis,
6. Install a pump in the primary containment area,
7. If the sample meets the MMER, immediately begin pumping the primary containment downstream towards Lake A54 and continue until all water is removed. Large quantities of

water will not be allowed to accumulate in the containment area over the summer period. This will keep the water from approaching the height of the culvert in the road,

8. Collect monthly samples from the primary containment area and monitoring stations downstream, and report this data to the NWB.

Should you have any questions or concerns, please do not hesitate in getting in touch with me at 819 277 5444 or jwitteman@agnico-eagle.com.

Yours sincerely,

John Witteman

Cc. Stephen Hartman, Kivalliq Inuit Association

Arsenic in water before and after development of the underground (mg/L)

(All water bodies are below the Primary Containment.)

Date	Primary Containment (P1)	Lake A54	Lake A38	Lake A8 (Pump Lake) (NWB-MEL2)	Stream A8-7	Lake A6
Aug-94				0.001		0.001
1996 (no date)		0.004	0.005	0.003		0.003
1996 (no date)				0.004		
Apr-97				0.002		
Jun-97					0.001	
Jul-97				0.002		0.002
Apr-98				0.002		0.005
Jun-98					0.002	
Jul-98				0.002	0.002	0.001
Jul-99						0.004
Jul-00						0.003
Jul-04						0.001
Sep-04						0.002
Jul-05						0.003
Sep-05						0.002
Jul-06						0.001
Sep-06						0.002
Jul-07			0.004	0.002	0.002	
Oct-07		0.003				
	Before underground development above, after development below					
May-08	0.004	0.002				
Jun-08	0.012	0.003	0.003	0.001	0.001	
Jul-08		0.001		0.002	0.003	
Aug-08	0.029	0.004		0.002		
Oct-08	0.004	0.003		0.002	0.002	
Apr-09				0.003		0.006
Jun-09		0.003	0.003	0.002	0.001	
Jul-09						<0.005
Aug-09	0.014	0.003	0.004	0.002		
Sep-09	0.011	0.004	0.006	0.003	0.002	
Jun-10	0.006	0.00323	0.00285	0.0007	0.00108	
Jul-10	0.0216	0.0044	0.0043	0.0029	0.0029	
Aug-10	0.002	0.0017	0.0027		0.0022	
Sep-10	0.0012	0.0035	0.0114	0.0049	0.0049	

Note: Values highlighted are above the CEWQ guideline limit of 0.005 mg/L

Other Project Water Sample Locations

Project Water Sample Location (Mandated)

Streams

Operations Pad

Containment Pond

Lakes

Watershed Boundary

Scale: 1:25,000

Grid: NAD83 Z15

6,990,000 m N

6,988,000 m N

6,986,000 m N

539,000 m E

541,000 m E

543,000 m E

537,000 m E

Woody Lake

Lake B7

B7-6

Containment Pond

Operations Pad

MEL6

P1

A15

A13

A54

Peanut Lake

Lake A54

MEL1

TAP

MEL3

MEL4

MEL5

MEL7

Meliadine Lake

Bud Lake

Lake B6

Underground Development

A9

A38

MEL2

Lake A8

Pump Lake

A8-7

Lake A6

Peg Lake

B2-1

Meliadine Lake

6,992,500 m N

6,987,500 m N

6,982,500 m N

6,977,500 m N

6,972,500 m N

535,000 m E

540,000 m E

545,000 m E

Meliadine Lake

Control Lake

Meliadine River (ML-R)
Near Rankin Inlet

Hudson Bay

Other Water Sampling Sites

N

W

E

S

0 2 4

kilometres

0 0.5 1

kilometres

PROJECT

MELIADINE GOLD PROJECT

TITLE

2010 WATER SAMPLING LOCATIONS

DRAWING	JW, NL	DATE	SEPT 2010

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File: AEM GIS Database

Figure