

29 July 2015

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

## Re: 2BB-MEL1424 - Water License Amendment #7:

- (1) Increase allowable water use from 290 m<sup>3</sup>/day to 299 m<sup>3</sup>/day,
- (2) Removal of the specific allocations of water quantities for the camp and for exploration purposes under the water licence, and
- (3) Installation of two BIONEST Kodiak systems for additional wastewater treatment.

Dear Ms. Beaulieu;

## (1) Increase allowable water use from 290 m³/day to 299 m³/day

The maximum quantity of water available for use under the water licence is presently 290 m<sup>3</sup>/day. In renewing the Water Licence 2BB-MEL1424 on July 22, 2014, the Water Board noted that,

"No concerns were expressed by interveners in their submissions with respect to the requested freshwater amount requested by the Licensee, or to the manner in which it is obtained or used" (page x of NWB letter)."

The quantity of water used in the camp varies dependent on the number of people on site, this being 120 - 250 persons in 2015 dependant on activities and time of year. In this, water use can approach the present upper limit of 290 m³/day some days. When the camp is full, it will also proving difficult to remain within the 45 m³/day for camp water use, especially seeing the recorded camp volume includes both direct and indirect water use. To provide a cushion, Agnico Eagle is requesting the maximum allowable water use not exceed 299 m³/day.

## (2) Removal of the specific allocations of water quantities for the camp and for exploration purposes at the Meliadine Project

Agnico Eagle is being constrained by the specific quantity of water allocated for direct and indirect use in the camp (maximum 45 m³/day) and for use in exploration activities (maximum 245 m³/day). Agnico Eagle is cognizant of the reasoning behind the two allocations as the Nunavut Water Board needs to track the quantity of wastewater resulting from all uses. The flexibility Agnico Eagle seeks is possible through changes to Part C of the licence.

From the water licence, PART C: CONDITIONS APPLYING TO WATER USE presently states:

C1. The Licensee shall obtain all water for camp or domestic uses, up to a maximum of forty-five (45) m3 per day, from the Meliadine Lake at Monitoring Program Station MEL-1. Underground workings and associated infrastructure, Waste Rock storage Pad and Drill water shall be obtained from Meliadine, Pump, A8 Lakes and small ponds proximal to the drilling targets as outlined in the Application and measured at Monitoring Program Station Mel-2, and shall not exceed two hundred and forty-five (245) m3 per day. Total water use for all purposes shall not exceed two hundred and ninety (290) m3 per day.

Taking into account our request to increase the quantity of water available for use from 290 m<sup>3</sup>/day to 299 m<sup>3</sup>/day, Agnico Eagle proposes this clause be changed to the following:

C1. The Licensee shall obtain all water for camp or domestic uses, up to a maximum of forty-five (45) m3 per day, from the Meliadine Lake at Monitoring Program Station MEL-1. Underground workings and associated infrastructure, Waste Rock storage Pad and Drill water shall be obtained from Meliadine, Pump, A8 Lakes and small ponds proximal to the drilling targets as outlined in the Application and measured at Monitoring Program Station Mel-2, and shall not exceed two hundred and forty five (245) m3 per day. Total water use for all purposes shall not exceed two hundred and ninety-nine (299) m3 per day.

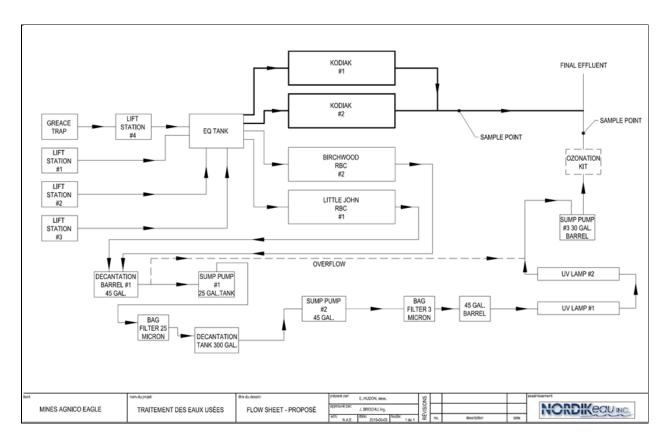
These changes would provide Agnico Eagle with the flexibility in managing its water use. The NWB would still know how much water is being used for each purpose as Agnico Eagle would continue to measure and record the quantities of water used as set out in water licence Clause J2:

J2. The Licensee shall measure and record, in cubic metres, the daily quantities of water utilized for camp, drilling, trenching and other purposes.

Agnico Eagle supports Clause J2 and subsequent clauses in Section J of the licence in reporting the same.

## (3) Installation of two BIONEST systems for enhanced water treatment

Wastewater treatment at the Meliadine camp has improved over the years. In 2010-2011, monitoring results of treated wastewater indicated that oil and grease, total suspended solids and faecal coliforms often exceeded the discharge criteria for MEL-7. In April 2012, Agnico Eagle installed a second BIOdisk system and an equalization tank. In addition, an air bubbler was installed to increase dissolved oxygen in the BIOdisk systems. Because of these installations and optimization of wastewater treatment process, effluent quality improved excepting for faecal coliforms. In January 2013, Agnico Eagle installed a new ultraviolet (UV) treatment after the BIOdisks with a recirculation loop to double the UV exposure of the water. From experience, we have learned that two BIOdisks can only adequately treat wastewater for approximately 125 workers. With double this number of workers possible in camp in the near future, wastewater treatment capacity needs to double. To address this need for extra wastewater treatment capacity, Agnico Eagle is proposing to upgrade its wastewater treatment facilities by installing two-BIONEST Kodiak systems to handle the extra load. The figure below shows the layout of the BIONEST Kodiak systems, which will be in parallel with the BIOdisks (RBC).



The BIONEST Wastewater Treatment Solutions website describes the system providing the following:

The **BIONEST**  $^{TM}$  advanced secondary treatment system uses technology that reproduces an accelerated version of the natural purifying process that occurs in the ground. This process takes place in a restricted and controlled environment in order to remove from the wastewater all residues that are harmful to your

health and to the environment. **BIONEST TM** technology treats the wastewater using a microbial culture fixed to a synthetic media. This media is a non-toxic polymer ribbon that is engraved in order to facilitate the implantation of the naturally occurring microbial culture in wastewater. So there is no need to add any microbial culture to the system.

(Source: <a href="http://www.bionest-tech.com/NT-en/product/329/relocatable.html">http://www.bionest-tech.com/NT-en/product/329/relocatable.html</a>)

The BIONEST Kodiak systems will be housed in two 40-foot shipping containers specifically designed for Nunavut's northern climate and they will be placed on a pad near the BIOdisks. Their location in relation to the BIOdisks is shown on figure 1. A BIONEST Kodiak operating manual is included as part of our amendment application.

The BIONESTS and BIOdisks, together with other components of the overall wastewater treatment system, will provide Agnico Eagle with the wastewater treatment capacity to meet MEL-7 discharge criteria.

Should you have any questions or concerns with Agnico Eagle amendment request, please do not hesitate in getting in touch with me at 819 763 0229 or stephane.robert@agnicoeagle.com.

Yours sincerely,

Stéphane Robert

Manager Regulatory Affairs, Agnico Eagle

Cc. Jack Dutil, Construction Manager, Meliadine, Agnico Eagle Luis Manzo, Veronica Tattuinee – Kivalliq Inuit Association David Frenette, John Witteman - Agnico Eagle

