

August 2<sup>nd</sup>, 2016

Manager of Licensing Nunavut Water Board P.O. Box 119 Gjoa Haven, NU X0B 1J0

Re: Water License 2AM-MEA1525: Bay Goose Pit Re-flooding - Siphon Testing

Madam, Sir,

Pit flooding was identified as an important aspect of the Meadowbank Mine Site closure in the Meadowbank Interim Closure and Reclamation Plan (Golder, 2014). As mining ceased in Goose Pit, it was planned to commence flooding of the pit in 2016 as presented in the Meadowbank Water Management Report and Plan 2015. The current flooding technique proposed for the Portage and Goose Pits is to use a combination of pumps and siphons to achieve the pumping rates prescribed by the water balance which conforms to the approved volume stipulated in Water License 2AM-MEA1525. The solution involving a siphon pipe system has been chosen in order to limit fuel consumption, to design a system with low maintenance for closure purposes and to use material already available on site. Agnico Eagle is planning to start testing the siphon for the Goose pit reflooding mid-September 2016. This first reflooding period would only constitute a test period for the system, to verify if the design of the siphon responds well to the field conditions, and to develop design modifications if required. The volume of water pumped from Third Portage Lake for this first test period will represent approximately 200,000 m<sup>3</sup>. Only one siphon will be installed for the first test period. Please find enclosed with this letter a technical memo outlining the construction design of the siphon for Goose pit reflooding. Once the siphon system has been tested, results from the tests and the modifications to be done on the system will be included in the annual report.

To do so, Agnico proposes to withdraw freshwater from Third Portage Lake at station ST-33 (14W 638 942W, 7212152N). It is expected that the pumping station will remain the same throughout re-flooding operations at Goose Pit. Water will be transported via a pipeline travelling over the Bay Goose Dike to Goose Pit.

Hydraulic calculations were based on the following parameters.

TPL water elevation (inlet)	133.6 m
Bay Goose Dike crest elevation	138.0 m
Outlet Elevation	129.0 m
Maximum lift < 10m	4.4 m
Total head available	4.6 m
Pipe nominal diameter	14 in HDPE IPS, DR-17



CHW	130
Total pipe length	164 m
Pipe inside diameter	311 mm
Target flow	220 l/s

The volume of freshwater obtained from Third Portage Lake will be measured, recorded and reported to the NWB in Monthly Monitoring Reports as per Part I Item 8 and 20. Water pumped from Third Portage Lake, for all purposes, will not exceed a total of two million three hundred fifty thousand (2,350,000) cubic meters per year in 2016.

In accordance with water license 2AM-MEA1525 Part E Item 6 and the DFO *Freshwater intake end-of-pipe fish screen* guideline, the intake hose will be equipped with a screen of a maximum mesh size of 2.54 mm to ensure fish are not entrained. Water will be withdrawn at a maximum rate of 0.22 m³/s with an open screen area of 2.04 m² to ensure fish do not become impinged on the screen. Finally, the intake hose will be located at a minimum of 0.6 m from the bottom to prevent lake-bottom erosion.

Should you have any questions regarding this letter, please contact me or Erika Voyer.

Regards,

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cc: Jamie Quesnel, Agnico Eagle Mines Ltd.

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