

**REVIEW OF**  
**AMENDMENT of the TYPE A WATER LICENSE**  
**for the MEADOWBANK GOLD PROJECT**

**Prepared By:**



**KIVALLIQ INUIT ASSOCIATION**

**OCTOBER 9, 2013**

## **INTRODUCTION**

This report documents the review of Agnico-Eagle Mines Ltd. (AEM) Type “A” water license amendment for the Meadowbank Gold Project. As part of this review the following documents were reviewed:

- 1) Application for Amendment, NWB License 2AM-MEA0815, April 19. AEM
- 2) Meadowbank Gold Project Water Management Plan, March, 2013. SNC-Lavalin
- 3) Seepage Water from Waste Rock Storage Facility – Sample Location St-16. AEM

The KIA, represents the Inuit beneficiaries of the Kivalliq Region, at the territorial and regional levels, and supports sustainable economic development opportunities for Inuit beneficiaries.

The review was completed by the KIA's long-time technical consultants GeoVector Management Inc. of Ottawa, Ontario.

## **GENERAL COMMENTS**

It was recommended by AANDC that AEM apply for an amendment to the Type “A” water license for the Meadowbank Gold Project. This recommendation was based on the fact that the project has exceeded the permitted rate of annual fresh water use since start-up in 2010.

The main factors contributing to exceeding the permitted rate are:

- 1) Higher than anticipated rates of ore processing, and
- 2) An adjustment in the initial water balance model which resulted in a deficit of reclaimed water.

## **REVIEW SUMMARY**

For this submission, the comments summarized below represent the main themes defined by this review.

### **1) Increase in Permitted Rate of Fresh Water Use per Annum**

AEM has requested a water license amendment to the currently permitted rate of 700,000 cubic metres per annum to an amended rate 1, 870,000 cubic metres in 2013 and 1,150,000 cubic metres thereafter. This amendment request is based on the projection of increased fresh water uses for domestic camp use, mining, milling and associated uses. The water will be drawn from Third Portage Lake. The total volume to be withdrawn for based on the projected maximum use for 2009 – 2018 would not exceed 2.5% of the estimated volume of Third Portage Lake. Based on the information provided in the amendment application and supporting documents on water withdrawal, and AEM’s commitment to increase monitoring from monthly to weekly frequency if changes in water levels or erosion are observed in Third Portage Lake, the KIA has no issue with the amendment request.

## **2) Increase in Footprint of the Waste Rock Pile**

The increase in the footprint of the waste rock storage could create more contact water points with associated seepage. This was evident based on the elevated parameters (ie. copper, iron, nickel, manganese and sulphate) at sample location ST-16 due to seepage water from waste rock storage. Monitoring of this should be continued.

## **3) Water Chemistry of the Tailings Storage Facility**

The water chemistry of the north cell of the Tailings Storage Facility (TSF) should continue to be monitored in order to identify potential parameters (ie. total cyanide, copper, iron, nitrate, chloride and ammonia) that may become a problem if discharged to the environment without treatment. The importance of this monitoring is evident based on the parameters (ie. copper, iron, nickel, manganese and sulphate) which were elevated at sample location ST-16 due to seepage water from waste rock storage.

## **4) Additional Information Required**

One of the main factors contributing to exceeding the permitted rate for fresh water was the higher than anticipated rate of ore processing. It is important to know if this higher production rate is due to either;

- more material being mined, which would cause an increase in the amount of tailings and waste rock, or
- the same amount of material being mined in a shorter timeframe, which will fill the currently permitted tailings and waste rock piles.

If the higher production rate is due to more material being mined than was permitted, the Proponent will be required to provide more information on how this increased production will affect the following areas of the project:

- 1) The areal and elevation footprint of the Tailings Storage Facility.
- 2) The areal and elevation footprint of the Waste Rock Storage.
- 3) Changes to the reclamation plan based on the increases noted in 1) and 2).
- 4) Changes to the security deposit based on the increases noted in 1) and 2).
- 5) Changes to the monitoring plans based on the increases noted in 1) and 2).

## **RECOMMENDATIONS**

**The KIA has the following recommendations:**

- 1) Based on the information provided in the amendment application and supporting documents on water withdrawal, and AEM's commitment to increase monitoring from monthly to weekly frequency if changes in water levels or erosion are observed in Third Portage Lake, the KIA has no issue with the amendment request.
- 2) The KIA agrees with the continued monitoring of water chemistry from Waste Rock Pile seepage points and the Tailings Storage Facility.

- 3) If the higher production rate is due to more material being mined than was permitted, the KIA would ask the Proponent to provide more information on how this increased production will affect the areal and elevation footprint of the Tailings Storage Facility and Waste Rock Storage. In addition, information on any changes in the reclamation plan, security deposit and monitoring plans should be provided by the Proponent.