



# AGNICO EAGLE

August 15<sup>th</sup>, 2017

Sophia Granchinho  
Manager, Impact Assessment  
Nunavut Impact Review Board  
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**Re: Agnico Eagle's response to Meadowbank Gold Project 2016 Annual Report and Recommendations – Amaruq Road (11EN010)**

Dear Ms. Granchinho,

As requested, the following information and comments are intended to address the recommendations outlined in response to the NIRB recommendations and comments in the letter dated July 6, 2017, Opportunity to Address Comments Received Regarding Agnico Eagle Mine Ltd.'s "Meadowbank Gold Project" 2016 Annual Report.

Should you have any questions or require further information, please do not hesitate to contact us at the below.

Regards,  
**Agnico Eagle Mines Limited – Meadowbank Division**

Regards,

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Felexce Ngwa, Indigenous and Northern Affairs Canada  
Georgina Williston, Environment and Climate Change Canada  
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## 1. Road Construction/Quarries: Summary of Construction Activities

**Concern:** Road construction began in February 2016. By the end of 2016, AEM reports that 27.5 km of the road had been completed, from KP 16+900 to KP 47+000. The KP labels do not appear on Figure 1: Amaruq Exploration Access Road Layout and are not explained in the text, making it difficult to determine what sections of the road were finished in 2016.

**Recommendation 54:** Please explain what KP 16+900 and KP 47+000 are in the text, and label on Figure 1. This information is presented in Appendix 2 but should also appear in the Annual Report itself.

**Agnico Eagle's Response:**

*KP is the Kilometer Point, it means that the road has been completed from kilometer point 16+900 to 47+000 (16.9 to 47.0 kilometres) in 2016. As the road started at KM 0 at Vault, there is no difference between the appellation, for example, KP 16+900 and 16+900. For the 2017 Annual Report, Agnico will make to use only one nomenclature in the main document and Figure to avoid any confusion.*

## 2. Road Construction/Quarries: Geotechnical Inspection

**Concern:** The Water License requires that annual geotechnical inspections of the road be conducted, including stream crossings and quarry and borrow areas. AEM reports that no annual geotechnical inspection of the AEAR was carried out in 2016, but that it plans to complete one in 2017. AEM also states that the Amaruq Road Supervisor and Environment Department typically conduct weekly inspections of the AEAR for geotechnical or environmental issues during construction. The results of these weekly inspections are not summarized in the Annual Report.

**Recommendation 55:** In the absence of an annual geotechnical report for 2016, AEM should provide a summary of the weekly inspections conducted by the Amaruq Road Supervisor and Environment Department.

**Agnico Eagle's Response:**

*Agnico Eagle will refers you to Section7 "Inspection and Maintenance of the Amaruq Road" of the Road Management Plan (Appendix 3 of the 2016 Annual Report) for a complete review of the monitoring and inspection program. In 2016, no issues have been observed. A summary of the inspections completed by Environment and the Road Supervisor will be included in the 2017 Annual Report.*

## 3. Road Construction/Quarries: Geotechnical Inspection: 2017 Work Plan

**Concern:** AEM submitted its 2017 Work Plan for the AEAR to the KIA in December 2016 (Appendix 2). The Work Plan mainly focuses on activities planned for the IOL portion of the road.



The AEM states that Figure 1 of the Annual Report illustrates what portion of the road is on IOL, but Figure 1 does not contain this information.

**Recommendation 56:** There are at least seven different colours assigned to the road in Figure 1, but no legend explaining what these colours mean. Please provide information to explain what the different colours mean, and also indicate what portion of the road is on IOL.

**Agnico Eagle's Response:**

*Agnico Eagle acknowledges KIA's comments and will ensure that future map within Annual Report contain an explicative legend. Below is the description of the different colors use in Figure 1 of the 2016 Annual Report:*

- *All areas covered by the color light pink represents areas on Inuit Owned Land*
- *All areas not covered by color pink represent areas on Crown Land*
- *All seven colors used along the road represent some sections of the road for construction purpose only. Agnico will make sure to use only one color to represent the road in the 2017 Annual Report.*

#### **4. Spill Management**

**Concern:** Table 5.1 lists 14 non-reportable spills that occurred in relation to the AEAR construction in 2016. A majority of these spills (9/14 or 64%) were due to broken equipment (e.g., hydraulic hose, hydraulic cylinder, coolant line, engine oil pan valve, engine head gasket). It would seem that this type of spill should be almost entirely preventable through proper maintenance and inspection.

**Recommendation 57:** Please indicate why so many spills are due to broken equipment, and what action is being taken to reduce this risk in the future.

**Agnico Eagle's Response:**

*Spills reported internally in 2016 mainly occurred during the winter season, when the equipment worked during cold conditions. As for the operations at the Meadowbank site, an emphasis is put on operator awareness, pre-operational checking of equipment and preventive maintenance of the equipment to prevent spills. A spill reduction action plan was implemented in 2016 and is still ongoing. The initial factors identified was also added equipment wear to explain the overall spill increase, in addition to improvement in reporting and monitoring of the spills. Operator awareness and pre-operational checking of equipment may also be contributing to the increase in spills. Spill prevention and response training is also provided to the personal working on the AEAR. It should be noted that, spills are contained and cleaned, contaminated material is disposed of in the appropriate area (landfarm, TSF, if required), and the clean-up actions are monitored closely by the Environment Department. There was no off site impact to any watercourses as a result of spills in 2016.*



## 5. Monitoring: Acid Rock Drainage and Metal Leaching

**Concern:** Several acronyms are used in this section which are not spelled out in the text (e.g., ABA, ML, SFE, WRA).

**Recommendation 58:** Please ensure that all acronyms are spelled out in full the first time they appear in the text. We also recommend a list of acronyms at the beginning of the AEAR Annual Report.

**Agnico Eagle's Response:**

*Agnico Eagle acknowledges KIA's comments and will ensure that all acronyms are spelled out in full the first time they appear in the text. A list of abbreviation will also be added at the beginning of the 2017 Annual Report.*

## 6. Appendix 3 – Amaruq Road Management Plan, Version 2 2017

**Concern:** The Road Management Plan discusses mitigation measures and protocols to protect wildlife, prevent permafrost degradation, and control surface runoff and sedimentation during construction and operations.

In Section 10.1, AEM describes the general wildlife monitoring program that will be established once the road is constructed. The data collected will include type of wildlife observed, estimate of numbers, and nearest kilometre marking along the road. We believe it would also be useful to record what the wildlife is doing when observed, and estimated distance from the road.

**Recommendation 59:** We recommend recording wildlife behaviour and distance from the road as part of the regular wildlife surveys to be established once construction is complete.

**Agnico Eagle's Response:**

*Agnico Eagles acknowledge with KIA'S comments. As for the Meadowbank AWAR wildlife survey, the following data will be recorded when doing the wildlife survey along the AEAR:*

- *Time*
- *Species*
- *Quantity*
- *Habitat Type*
- *Behavior*
- *Direction of Travel*
- *Direction from the Road*
- *Distance from the Road*
- *Road KM*
- *GPS*



*The Road Management Plan will be update to reflect this monitoring and submitted with the 2017 Annual Report.*

**Concern:** In Section 10.1.2, an adaptive management flow chart is presented for monitoring and management of predatory mammals in the vicinity of the AEAR and associated eskers (Figure 3). If an active den is found, the flow chart indicates that monitoring will be initiated during the denning season “from a maximum possible distance” (p. 40). It would be helpful to state a limit to how close observers should approach dens to minimize disturbance during monitoring, based on established guidelines in the scientific literature.

**Recommendation 60:** Please provide a minimum distance observers should stay away from dens during monitoring.

**Agnico Eagle’s Response:**

*Wolf packs are unable to easily relocate (especially before about mid-July). Pups mature and are able to travel with adults by sometime in September or early October. Packs are sensitive to disturbances during this season (especially before about mid-July) and areas actively used for denning or nursery should be avoided. Then, a distance of at least 1 km from actively used denning/nursery areas should be applied.*

**Concern:** In Section 11.1 AEM states that water quality monitoring will be conducted during road construction and operation to test water quality draining from open borrow pit sites and from the road base materials. It is not clear what water quality parameters will be measured, nor how frequently or where along the AEAR.

**Recommendation 61:** Please explain the water quality monitoring program design for the AEAR, including parameters to be measured, frequency of sampling and location of sampling sites.

**Agnico Eagle’s Response:**

*If any significant seep originating from the borrow pit or significant water ponding along the AEAR that are likely to reach receiving waters, water samples will be take and analysed for the following parameters as describe in the Road Management Plan Section 5.4:*

- *Physical Parameters: pH (field and laboratory), temperature (field), alkalinity, bicarbonate, carbonate, electrical conductivity, hardness, hydroxide, ion balance, total dissolved solids, total suspended sediments*
- *Nutrients: NH<sub>4</sub>, NO<sub>3</sub>, NO<sub>2</sub>, PO<sub>4</sub>*
- *Major Ions: Ca, Cl, Mg, K, Na, SO<sub>4</sub>*
- *Trace Metals: Al, Sb, As, Ba, Be, B, Cd, Cr, Cu, Fe, Pb, Li, Mn, Hg, Mo, Ni, Se, Ag, Sr, Sn, Ti, U, V, Zn*



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*Sampling frequency will be determined according to the sampling location and time of the year. More details will be provided in the 2017 Annual Report regarding the ponding water along the road and eskers in 2017.*