



## The Nunavut Impact Review Board's 2009 Site Visit Report for the Meadowbank Gold Project

Proponent: Agnico-Eagle Meadowbank  
555 Burrard Street, Suite 375  
Box 209, Two Bentall Centre  
Vancouver, British Columbia V7X 1M8

Monitoring Officer: Amanda Hanson  
Contact phone: (867) 983-4615

Site: Meadowbank site facilities; all-weather access road; Baker Lake fuel tank farm, storage and marshalling area

Proponent Contact: Stéphane Robert  
Title: Environment Superintendent  
Contact phone: (819) 763-0229

Visit dates: August 31 – September 1, 2009

Photos: Amanda Hanson, Nunavut Impact Review Board (August 31 – September 1, 2009)

---

### 1. Introduction

In December 2006, the Nunavut Impact Review Board (NIRB) issued a Project Certificate (No. 004) for the Meadowbank Gold Project (Project) in accordance with Section 12.5.2, Nunavut Land Claims Agreement (NLCA).

The project includes a gold mining operation located approximately 70 kilometres (km) north of the Hamlet of Baker Lake, as well as ancillary infrastructure consisting of barge unloading facilities, a laydown storage and marshalling area, a 40 million litre (ML) fuel tank farm, and associated interconnecting roads located approximately 2 km east of Baker Lake. The construction of a 110 km all weather private access road (access road) from the Hamlet of Baker Lake to the Meadowbank mine site was completed in 2008. The access road opened to mine related transportation of materials and personnel in March 2008.

Supplies are shipped via barge from southern origins to Baker Lake where they are offloaded at the laydown and marshalling facilities. From there, materials and fuel are transported to the site via truck haul along the 110 km access road.

At the time of the site visit, no mining activities had yet commenced. Construction of the Meadowbank site and exploration drilling are ongoing, with Agnico-Eagle Mines Ltd (AEM) hoping to begin pre-commissioning of the mine equipment by early 2010.

## **2. Objectives & Focus of Site Visit**

As per the Project Certificate (No. 004) issued for the Meadowbank Gold Project, the NIRB is responsible for the monitoring of this Project in accordance with Articles 12.7.1 and 12.7.2 of the NLCA.

The objectives of the NIRB's site visit were therefore to determine whether and to what extent the land or resource use in question is being carried out within the predetermined terms and conditions (Section 12.7.2 (b), NLCA).

Prior to the site visit, the Monitoring Officer reviewed the following items: Final Environmental Impact Statement, Final Hearing Report, Project Certificate (No. 004), follow up correspondence from the 2008 site visit (attached as [Appendix A](#)), *Terrestrial Ecosystem Management Plan*; *Transportation Management Plan for the Tehek Lake All Weather Private Access Road*; and AEM's *2008 Meadowbank Annual Report*. Based on this review, the 2009 site visit focused upon the following parameters:

1. General Observations
2. Water Quality and Waste Management (Conditions 25 and 27)
3. All-Weather Private Access Road (Condition 32)
4. Marine Environment (Conditions 36 and 38)
5. Wildlife and Terrestrial (Conditions 56, 58, and 59)
6. Noise (Condition 62)
7. Human Health (Condition 66)
8. Air Quality (Condition 71)
9. Other (Condition 81)

The observations resulting from this site visit shall, wherever possible, be incorporated into the measurement of the relevant effects of the project, as per Section 12.7.2(a) of the NLCA.

## **3. 2009 Site Visit**

On Monday August 31, 2009 the NIRB staff joined Agnico-Eagle representative Stéphane Robert to tour the ancillary facilities in Baker Lake. The tour included the fuel storage area and barge offloading facilities.

On the morning of September 1, 2009, Stéphane Robert of AEM and NIRB staff Amanda Hanson and Kelli Gillard met in Baker Lake and travelled via the access road to the Meadowbank site.

The site visit included a tour of facilities at the Meadowbank site which comprised: the camp; mill; Goose Bay Dike (north portion); active mine area; air strip; fuel storage area; waste and hazardous materials storage area; and incinerator.

The following observations were made during the site visit:

### **3.1. General Observations**

The following are general observations made during the site visit and do not pertain specifically to any particular terms or conditions of the Project Certificate:

- a.** A meeting with François Landry of AEM at the barge landing and marshalling facility in Baker Lake provided discussion regarding an all-terrain vehicle (ATV) trail along the shoreline of Baker Lake that has been impacted by the presence of AEM's spud barge, fuel transfer pipeline, and barge off-loading equipment (impact initially identified during the Monitoring Officer's 2007 site visit). AEM has since created an area specifically for ATV crossing that does not interfere with any fuel transfer or barge off-loading activities (Photo 1).
- b.** During the drive from the Hamlet of Baker Lake to the Meadowbank site, a number of caribou herds were viewed alongside the access road, ranging in size from a group of four individuals to one of approximately forty. During the visit the Monitoring Officer did not observe the recording or relay of this information to dispatch or to the environmental technician on site as required by the Proponent's management plans (*Terrestrial Ecosystem Management Plan (TEMP)* p 4-16).
- c.** During the drive from the Meadowbank site to the Hamlet of Baker Lake, the touring party observed a grizzly bear and cub walking away from the all-weather access road (Photo 2). Stéphane Robert advised the Monitoring Officer that he would record the sighting and advise appropriate parties.
- d.** Black triangular flags had been installed approximately every 10 metres along the access road, meant to increase visibility – especially during the winter months.
- e.** Stéphane Robert advised that the communications tower installed at the emergency shelter at kilometer 37 along the access road had been outfitted with red lighting at the request of local hunters (Photo 3).
- f.** The Proponent advised that Quarry 22 is serving as a land farm for contaminated soils and as a storage site for used tires.
- g.** On route to the Meadowbank Site, the Monitoring Officer visited Nuna M&T's previously permitted "Nova Camp" located approximately 3.5 km north of the Hamlet of Baker Lake. Stéphane Robert advised that no further activities were conducted out of this camp, but that AEM was storing fuel at the Nova Camp (Photos 4 and 5).
- h.** The Meadowbank site employs a dual chamber forced air incinerator for the combustion of all non-hazardous, combustible materials at the site (Photo 6).



Photo 1: ATV crossing at Baker Lake fuel storage and barge landing facility.



Photo 2: Grizzly bear and cub walking northwest, away from the access road.



Photo 3: Communications tower at kilometre 37.



Photo 4: Fuel storage at Nova Camp.



Photo 5: Fuel storage at Nova Camp.



Photo 6: Dual chamber forced air incinerator.

Sections 3.2 through 3.8 relate to those sections of the Meadowbank Project Certificate as indicated, with specific terms and conditions providing a basis for the observations.

### ***3.2. Water Quality and Waste Management***

#### ***a. Condition 25***

*“Cumberland shall manage and control waste in a manner that reduces or eliminates the attraction to carnivores and/or raptors. Cumberland shall employ legal deterrents to carnivores and/or raptors at all landfill and waste storage areas...”*

During the 2008 site visit, all domestic and combustible wastes at the Meadowbank site were separated and stored in sea-cans prior to incineration. GN-DoE Conservation Officer Joel Rose stated that keeping wastes inaccessible to wildlife is an acceptable and legal deterrent to carnivores and raptors.

During the 2009 site visit, all domestic, hazardous, and combustible wastes were observed to be segregated and stored in sea-cans prior to incineration or shipment to approved disposal facilities (Photos 7 and 8).

No carnivores or raptors were sighted near the mine site camp or other facilities during the 2009 site visit.



Photo 7: Kitchen waste segregated and secured.



Photo 8: Waste segregation and storage area.

**b. Condition 27**

*“Cumberland shall ensure that the areas used to store fuel or hazardous materials are contained using safe, environmentally protective methods based on practical, best engineering practices.”*

As evidenced by the 2009 site visit, AEM appears to be storing all fuel and hazardous materials associated with the Meadowbank project in a safe and environmentally protective manner (i.e. secondary containment of fuel storage areas, secure containment of hazardous materials) (Photo 9).





Photo 9: Baker Lake fuel tank farm.

### **3.3. All-Weather Private Access Road (AWPAR)**

#### **a. Amended Condition 32**

*“AEM shall operate the all-weather road as a private access road, and implement all such measures necessary to limit non-mine use of the road to authorized, safe and controlled use by all-terrain vehicles for the purpose of carrying out traditional Inuit activities. The measures AEM shall undertake include, but are not limited to:*

- a. Maintaining a gate and manned gatehouse at kilometer 5 of the Private Access Road;*
- b. In consultation with the Hamlet of Baker Lake, the local HTO, and the KivIA, update the All-Weather Private Access Road Management Plan to set out the criteria and processes to authorize and ensure safe and controlled non-mine use of the road by all-terrain vehicles for the purpose of carrying out traditional Inuit activities, and measure to limit all other non-mine use of the road. The updated*

- Plan is to be submitted to the GN, INAC, and KivIA for approval no later than one (1) month after the approval of revised Condition 32;*
- c. The posting of signs in English and Inuktitut at the gate, each major bridge crossing, and each 10 kilometres of road, stating that unauthorized public use of the road is prohibited;*
  - d. The posting of signs in English and Inuktitut along the road route to identify when entering or leaving crown land;*
  - e. Prior to opening of the road, and annually thereafter, advertise and hold at least one community meeting in the Hamlet of Baker Lake to explain to the community that the road is a private road with non-mine use of the road limited to approved, safe and controlled use by all-terrain vehicle for the purpose of carrying out traditional Inuit activities;*
  - f. Place notices at least quarterly on the radio and television to explain to the community that the road is a private road with non-mine use of the road limited to authorized, safe and controlled use by all-terrain vehicles for the purpose of carrying out traditional Inuit activities;*
  - g. Record all authorized non-mine use of the road, and require all mine personnel using the road to monitor and report unauthorized non-mine use of the road, and collect and report this data to NIRB one (1) year after the road is opened and annually thereafter; and*
  - h. Report all accidents or other safety incidents on the road, to the GN, KivIA, and the Hamlet immediately and to NIRB annually.”*

The Proponent has installed and is maintaining, a gate and manned gatehouse at kilometer 5 of the access road (Photo 10). The gatehouse is manned while the road is in operation for mine related traffic, with the gate in a lowered position and all traffic (both north and south bound) being required to check in with the employee at the gatehouse before proceeding.

The required signage was posted following the Monitoring Officer's 2008 site visit, and is currently in good condition.



Photo 10: Gate and gatehouse looking south toward Baker Lake.

### **3.4. Marine Environment**

#### **a. Condition 36**

*“Cumberland shall ensure the placement of local area marine mammal monitors onboard all vessels transporting fuel or materials for the Project through Chesterfield Inlet.”*

During the site visit, CB radio traffic indicated that marine mammal monitors from Chesterfield Inlet had arrived in Baker Lake and were awaiting turnaround on another vessel back to Chesterfield Inlet.

### **3.5. Wildlife and Terrestrial**

#### **a. Condition 56**

*“Cumberland shall plan, construct, and operate the mine in such a way that caribou migration paths through the Project, including the narrows west of Helicopter Island are protected. Maps of caribou migration corridors shall be developed in consultation with Elders and local HTOs, including Chesterfield Inlet and placed in site offices and upgraded as new information on corridors becomes available. Information on caribou migration corridors shall be reported to the GN, KivIA and NIRB’s Monitoring Officer annually.”*

The Monitoring Officer noted that the required maps outlining caribou migration corridors were posted in the site office of the Environmental Superintendent and other employees.

### **3.6. Human Health**

#### **a. Condition 66**

*“Cumberland shall establish a nursing station and hire a registered on-site nurse.”*

Stéphane Robert provided verbal indication that a nursing station had been established on site, and that AEM was employing a full time medic to staff the station, rather than a registered nurse.

### **3.7. Air Quality**

#### **a. Condition 71**

*“Cumberland shall, in consultation with EC, install and fund an atmospheric monitoring station to focus on particulates of concern generated at the mine site. The results of air-quality monitoring are to be reported annually to NIRB.”*

At the time of the site visit, the atmospheric monitoring station had not yet been set up. Stéphane Robert indicated that the station would be installed following discussions with EC regarding an optimal location.

### **3.8. Other**

#### **b. Condition 81**

*“Beginning with mobilization, and for the life of the Project, Cumberland shall provide full 24 hour security, including surveillance cameras and a security office at the Baker Lake storage facility/marshalling area, and take all necessary steps to ensure the safe and secure storage of any hazardous or explosive components within the Hamlet of Baker Lake boundaries.”*

The Monitoring Officer met with François Landry of AEM at the marshalling facility in Baker Lake where a security office had been set up near the dock (Photo 11). At the time of the site visit, no visible security measures had been implemented at AEM’s marshalling and storage area. No signage was posted indicating AEM’s ownership of the site, nor had any fencing or surveillance measures been put into place.

François Landry indicated that AEM employees are present at the security office and marshalling area 24 hours per day.

Stéphane Robert indicated that no hazardous or explosive materials are stored within the Hamlet of Baker Lake boundaries, rather, that all materials are sent immediately via truck to the Meadowbank site.



Photo 11: Security office at Baker Lake marshalling area, spud barge in background.

#### **4. Findings**

Neither sound metres nor atmospheric monitoring equipment had been installed on site at the time of the site visit as per Conditions 62 and 71, respectively. Sound monitoring has been undertaken during the 2008 reporting period, with results having been submitted as part of the Proponent's 2008 Annual Report. According to the report, sound metres cannot feasibly remain in place for an indeterminate period of time, but rather the metres are put into place when data collection is to take place. Relating to Condition 71, the Proponent indicated that the necessary equipment had been received with the 2008 barge supplies, and that the placement of atmospheric monitoring equipment would follow discussion with Environment Canada.

Where Condition 81 requires that full 24 hour security be present to ensure safe and secure storage of any hazardous or explosive components within the Hamlet of Baker Lake boundaries, the Monitoring Officer noted no security measures in place at the Baker Lake storage and marshalling area.

#### **5. Summary**

The Meadowbank site has grown significantly during the 2008-2009 season, with the most notable changes being the establishment of the primary crusher, storage, and mill buildings, the heightened number of employees working at the site, the ongoing diking of Second Portage Lake, and blasting activities taking place in the active mine site area.

Overall, the Proponent appears to be in compliance with a majority of the terms and conditions contained within the Meadowbank Project Certificate and reviewed during the NIRB's 2009 Site Visit. There are however, certain areas in which the Proponent appears to be non-compliant and which may require the Board's consideration.

Prepared by: Amanda Hanson  
Title: Monitoring Officer  
Date: October 16, 2009  
Signature:

A handwritten signature in black ink that reads "Amanda Hanson". The signature is written in a cursive style with a large initial "A".

Reviewed by: Ryan Barry  
Title: Director, Technical Services  
Date: October 19, 2009  
Signature:

A handwritten signature in black ink that reads "Ryan Barry". The signature is written in a cursive style with a long horizontal line extending from the end of the name.



## APPENDIX A

*Correspondence from Agnico-Eagle Mines Ltd – Follow Up to the 2008 Site Visit Report*



**AGNICO-EAGLE MEADOWBANK**  
555 Burrard Street, Suite 375  
Box 209, Two Bentall Centre  
Vancouver, British Columbia V7X 1M8  
Tel. 604.608.2557 Fax. 604.608.2559

agnico-eagle.com

October 24, 2008

*Via email and Xpresspost*

Ms. Amanda Hanson  
Monitoring Officer  
Nunavut Impact Review Board  
P.O. Box 1360  
Cambridge Bay, Nunavut X0B 0C0  
(867) 983-4615

Dear Ms. Hanson,

**Re: AEM Response to the Meadowbank 2008 Site Inspection Report – Project Certificate No.004**

The following information and comments are intended to address the observations and findings noted in section 4.0 of the document ‘*Monitoring Officer’s 2008 Site Visit Report for the Meadowbank Gold Project*’ made in relation to the conditions of Meadowbank Project Certificate No.004. Please note that there are four appendices attached to this letter.

**Condition 22:**

*The proponent has not met the requirements of Condition 22, that a lab be installed on site prior to the commencement of the Project. At the time of the site visit, no lab or related equipment were on site. The proponent indicated that these have been purchased and are expected to arrive with the 2008 barge supplies.*

**AEM Response**

AEM disagrees with the NIRB inspector’s observation that the on site lab was not installed prior to the “commencement of the Project”. AEM understood that NIRB intended that this condition required the installation and operation of the on-site lab before the commencement of any production mining (i.e., Project commencement). A laboratory has infrastructure requirements in order to operate, including but not limited to, engineered construction of buildings, adequate power, etc. thus AEM understood that commencement meant before production mining not project construction. This condition would otherwise be impossible to achieve.

The assay lab components were shipped to the Meadowbank site during the summer sea lift of 2007 but the barge containing the lab components had to overwinter in Rankin Inlet when ice formation in the narrows leading into Baker Lake prevented delivery into



Baker Lake. The lab arrived at Baker Lake with the 2008 sea lift and is currently under construction at the Meadowbank site (see attached photos in Appendix A). The lab is expected to be operational by the end of 2008. AEM is currently sending all of its environmental samples to an accredited external lab.

### **Condition 32**

*The proponent has not proven to be compliant with items a, b, or c of Condition 32 with respect to the all-weather private access road. Cumberland shall operate the all-weather road as a private access road, and implement measures to limit public access to the road, including:*

- a. The installation of locked gates at bridges 1 and 4;*
- b. The posting of signs in English and Inuktitut at each gate, each major bridge crossing, and each 10 kilometres of road, stating that public use of the road is prohibited;*
- c. The posting of signs in English and Inuktitut along the road route to identify when entering or leaving crown land;*

### AEM Response

Condition 32a: AEM made written application to NIRB on July 29, 2008 requesting that the condition requiring locked gates at the first two bridges be amended. AEM requesting that its current road access control procedures that involve use of a manned gatehouse that is already installed at Km 5 on the AWPAR to limit unauthorized access be sanctioned by NIRB in lieu of the two locked gates. This application is still pending a response from NIRB.

Condition 32b and c: These signs were ordered in both languages by AEM in July and have recently arrived on the 2008 sealift. They will be installed by the end of October. The sign wording and location is provided in Appendix B.

### **Condition 34**

*No road safety, search and rescue person had been hired by the proponent as is required by Condition 34. AEM has indicated that the Safety Superintendent and site Security team of the Meadowbank Project would be responsible for the duties of the road safety, search and rescue position.*

### AEM Response

AEM has established emergency procedures for the AWPAR which include safety, search and rescue included as Appendix C. The procedure involves the following elements:

- i) All authorized vehicles using the road are equipped with two way radios set to designated road frequencies that allow communication between vehicles and a central dispatch point at all times;
- ii) AEM has hired several local people who are assigned as the road dispatcher who control all authorized access on the road through the gatehouse and monitor via the radio all authorized activity on the to hired. This dispatch position is staffed 24/7;

iii) AEM has installed equipped emergency shelters (constructed from 20 foot long seacan containers painted bright orange) sited at 10 km intervals along the AWPAP;

iv) AEM has hired security personnel for the mine who patrol the mine site facilities and the road. These security personnel are on call 24 hours per day and carry radios set to the road frequencies. Dispatch would contact security in the event of an emergency on the road and security would then initiate a response, such as search and rescue or response to an accident. Security can access the site emergency teams, be it fire, medical or mine rescue or the RCMP as necessary.

### **Condition 36**

*Rachel Gould provided the Monitoring Officer an update with regard to Condition 36 (Appendix D), noting that three Elders had been successfully commissioned as marine monitors aboard NTCL barges. The NIRB anticipates receiving reporting to this effect.*

#### AEM Response

With assistance from the Hamlet of Chesterfield Inlet, in 2008 AEM retained the services of three elders from Chesterfield Inlet to act as wildlife monitors on the AEM chartered tugs and barges traveling past Chesterfield Inlet to Baker Lake. These three elders spent a total of 35 person days fulfilling this role. The wildlife monitors provided verbal reports to AEM's Community Liaison Officer in Baker Lake who then prepared a written trip report noting the findings as provided verbally by the elders. AEM found it necessary to fly these elders either to Baker Lake or Rankin Inlet to board the tugs. Transfer from a moving boat in the ocean as the tugs passed Chesterfield Inlet proved too great a safety risk. Copies of these reports are included as Appendix D.

### **Condition 39**

*With respect to Condition 39, the proponent filed the first Chesterfield Inlet information meeting annual report on August 10, 2007. In accordance with Condition 39, the annual meeting for 2008 to be held in Chesterfield Inlet is scheduled to take place September 22. The NIRB anticipates receiving the consultation report from the Proponent following this meeting.*

#### AEM Response

AEM met with the Hamlet Council in Chesterfield Inlet on the evening of September 22, 2008. The three wildlife monitors were also present to bring their observations to the Hamlet council. AEM provided the Hamlet with an update on the project including a PowerPoint presentation, and held an open question period. The meeting lasted about 2.5 hours. The Hamlet and the Wildlife elders presented their observations on the 2008 sealift and general consensus was that things went much smoother in 2008. Main concerns raised were as follows: questions on employment opportunities for people from Chesterfield Inlet, provision of gas for people who were ferrying the wildlife monitors out to the tugs, agreement that it was preferable to fly the elders to Baker Lake or Rankin Inlet to get on and off the NTCL tugs, work schedules for local employees who were to work at Meadowbank. During this same visit we met with the class of adults going through the Mine Preparatory Skills Upgrading training program underway at the adult education center and gave them a presentation on future opportunities at Meadowbank.

**Condition 40**

*In August 2007 the Proponent indicated that Andre Tautu had been contracted to conduct the Traditional Knowledge workshop in Chesterfield Inlet as per Condition 40. No meetings with the HTO had been held as of the site visit, and the Proponent indicated a difficulty in establishing formal contact with the HTO in Chesterfield Inlet (Appendix C).*

**AEM Response**

AEM has been unable to make any forward progress on this condition despite several attempts. We will try again in early 2009.

**Condition 56**

*No maps outlining caribou migration corridors were present in site offices. In addition to Condition 56 of the PC, Section 3.4.2.6 of the TEMP also requires that the Proponent ensure the placement of said maps.*

**AEM Response**

AEM has commissioned Gebauer & Associates to research and map the caribou migration corridors in the location of the Meadowbank Gold Project, including the area adjacent to Chesterfield Inlet. This information will be included in the Meadowbank Annual report, and maps will be displayed at the mine site as soon as possible (anticipated by the end of the year).

**Condition 62**

*No sound metres were installed on site at the time of the site visit as per Condition 62. The Proponent indicated that the necessary equipment was scheduled to arrive with the 2008 barge supplies.*

**AEM Response**

As part of the noise management plan, a noise monitoring program is required to collect noise information at noise-sensitive receptor locations during both the construction and operational phase. The noise monitoring was done by Golder and AEM at the beginning of September. Five stations were monitored over a 24 h period. A report will be produced by Golder and included in the Meadowbank Annual Report.

**Condition 77**

*Condition 77 requires that the Proponent review and coordinate their Emergency Response Plan with those of the Hamlets of Baker Lake and Chesterfield Inlet. Information received from the Proponent is conflicting and therefore not indicative of whether or not this Condition has been met.*

**AEM Response**

AEM has not yet formally coordinated emergency response procedures with the Hamlets of Baker Lake and Chesterfield Inlet. This issue has been discussed between AEM and the Hamlet of Baker Lake with both sides agreeing to move forward on this coordination when possible. AEM has updated its Emergency Response Plans during the summer of 2008 combining all of the previous plans (the AWPARG, the Meadowbank marshalling facility and the exploration camp) into a single coordinated emergency response plan. This revised response plan is currently before the NWB for review and AEM is awaiting

Plan approval. It should be noted that none of the milling chemicals have yet been shipped to site. The first shipments will arrive in the summer of 2009.

It should also be noted that AEM's emergency response plans are designed to start on arrival of materials in Baker Lake. NTCL has its own response plan dealing with emergency during marine transport when these materials are under their control. Copies of the NTCL plans have been submitted to the NWB and are referenced in the AEM Plan.

**Condition 81**

*Where Condition 81 requires that full 24 hour security be present to ensure safe and secure storage of any hazardous or explosive components within the Hamlet of Baker Lake boundaries, the Monitoring Officer noted no security measures in place at the Baker Lake storage and marshalling area.*

AEM Response

All hazardous commodities with the exception of diesel fuel are transferred from the unloading area direct to the Meadowbank Site. During the unloading of these commodities, 24 hour surveillance is occurring. AEM is planning to install a security camera for the tank farm and the barge unloading area.

Should you require any further information please contact me directly via email [stephane.robert@agnico-eagle.com](mailto:stephane.robert@agnico-eagle.com) or via telephone at 819-759-3700 ext. 814.

Regards,

A handwritten signature in black ink, appearing to read 'Stéphane Robert', with a long horizontal flourish extending to the right.

Stéphane Robert  
Environment Superintendent