AGNICO-EAGLE
MEADOWBANK DIVISION

February 18, 2012

Via Email and Xpresspost

Ms. Phyllis Beaulieu
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Dear Ms. Beaulieu,

Re: Meadowbank Water License 2AM-MEA0815 Part I, Item 13 – 2011 Annual Geotechnical Inspection Report

As required by Water license 2AM-MEA0815, Part I, Item 13, please find enclosed a copy of the document: *Report on 2011 Annual Geotechnical Inspection, Meadowbank Gold Project, Nunavut.*

Implementation Plan

Please consider the following information as the implementation plan to address the recommendations in Section 9.0 of the report.

DEWATERING DIKES

***Recommendation*: It is understood that AEM is preparing an Operation, Maintenance and Surveillance (OMS) Manual and Emergency Preparedness Plan (EPP) to cover all dewatering dikes.**

Action: The draft OMS manual and the Emergency preparedness plan are both currently in preparation and will be reviewed in the first quarter of 2012. These 2 will cover all dewatering dikes.

EAST DIKE

***Recommendation*: It is recommended that survey techniques be reviewed to improve the accuracy of the survey monuments;**

Action: AEM is in process of implementing a new monitoring system for the survey monuments.

Recommendation: A seepage collection system downstream of the East Dike is required to capture seepage such that the volume can be measured, water quality visually observed (turbidity), and the water removed (pumped) on a year round basis. AEM has indicated that they are looking into modifying the existing seepage collection system;

Action: A permanent system is in development and will be installed during the summer 2012.

Recommendation: AEM is currently conducting a risk assessment for the East Dike to determine if a mitigation program is warranted and if yes, to aid in the selection of an appropriate remediation program. The design engineer and Meadowbank Dike Review Board should support the selected program prior to it being implemented.

Action: The risk assessment will be presented to the design engineer and MDRB before it will be implemented.

WEST CHANNEL DIKE AND SOUTH CAMP DIKE

Recommendation: Instrumentation monitoring at the South Camp dike should continue on a regular basis and the damaged thermistor replaced at South Camp Dike;

Action: The monitoring of the instrumentation at South Camp dike is done on a regular basis. The damaged thermistor will be replaced in the summer 2012.

Recommendation: It is understood that an as-built report for the South Camp Dike is in preparation

Action: The as-built report will be finalized in Q1 2012.

BAY-GOOSE DIKE

Recommendation: Currently the dike crest surface, near the cutoff wall centreline, is highly irregular which limits visual observation of potential deformations, settlement, and/or cracking. At Bay-Goose, to assist in regular visual inspection of the dike by AEM personnel, it is recommended to smooth the existing surface 3 m (one dozer blade width) on either side of the dike centerline. It is understood that the thermal cap is currently not in place to facilitate access to existing casings and instrumentation in the event that remediation work be required in the next year. Once the thermal cap would be placed, it is recommended to smooth the surface, 3 m on either side of the thermal cap.
;

Action: The thermal capping will be done on the second and third quarter of 2012.

Recommendation: ***During the inspection, it was observed that the jet grouting spoils are still present over the rockfill platform. It is recommended to remove the spoils and dispose of them in a suitable location to reduce the potential influence of leachate from the spoils from reporting to Third Portage Lake. Alternatively, covering the spoils with suitable granular materials may be possible as it will reduce erosion of the spoil and minimize potential leachate to Third Portage Lake.***

Action: The spoil will be covered with rock on the second and third quarter of 2012.

Recommendation: ***A seepage collection system downstream of Bay-Goose Dike will be required to capture seepage such that the volume can be measured, water quality visually observed (turbidity) and the water removed (pumped) on a year round basis. It is assumed that this will be constructed once dewatering is complete;***

Action: The seepage collection should be constructed in the summer 2012.

Recommendation: ***It is understood that an as-built report for the Bay-Goose Dike is in preparation.***

Action: The as-built report is in development and will be finalized in the first quarter of 2012.

TAILING STORAGE FACILITY

Recommendation: ***At the time of the inspection, it was observed that the pond was impounded directly against Stormwater Dike and Saddle Dam 1; it is recommended that beaches be established at these structures prior to the onset of winter.***

Action: The beaches in Stormwater Dike were ongoing during all the fall and beaches is established on 90% of the dike. The beaches at Saddle Dam 1 were completed on November 12, 2011.

Recommendation: ***AEM is preparing an Operations, Maintenance and Surveillance (OMS) Manual and Emergency Response Plan (EPP) for the TSF. The OMS Manual and EPP should cover all aspects related to facility operation and management.***

Action: The draft OMS manual and the Emergency preparedness plan will be reviewed to cover all aspect related to the TSF in the first quarter of 2012.

Recommendation: ***An overall Emergency Response Plan (ERP) for the mine (AEM, 2009a) has been prepared which includes a risk assessment of potential failures for the Central***

Dike, Saddle Dams, and Stormwater Dike. The risk assessments should be regularly reviewed and updated, acknowledging existing conditions of each structure, and current information related to the operation of the TSF

Action: The development of the Risk Management and the Emergency Response Plan is ongoing involving all departments at Meadowbank. The overall Emergency Response plan will be updated in the first quarter of 2012 to cover all TSF structure and operation related to it.

Recommendation: It is understood that AEM will construct a permanent seepage collection and pump back system on the downstream side of all permanent dikes or dams around the TSF following completion of construction activities at each facility. Since the Saddle Dam 1 and Saddle Dam 2 are currently storing tailings and supernatant water, permanent seepage collection and pump back systems are required at these locations as soon as practicable;

Action: For Saddle Dam 1, the permanent seepage collection system will be put in place in the summer 2012. For Saddle Dam 2, no water or tailing will be in contact with the dam before 2013. The permanent seepage collection will be installed in 2013.

Recommendation: It is understood that as-built reports for the Stormwater Dike, Saddle Dam 1, and Saddle Dam 2 will be completed in 2012.

Action: The as-build report for the Stormwater Dike, Saddle Dam 1 and Saddle Dam 2 is in development and should be completed during the first quarter of 2012.

SADDLE DAM 1

Recommendation: At the time of the inspection, the tailings pond was impounded directly against the upstream face of Saddle Dam 1. At the time of the inspection, AEM indicated that they planned to resume tailings discharge near Saddle Dam 1 in mid-October to re-establish the beach to maintain the tailings pond away from the structure, thereby providing the geomembrane liner protection from potential ice damage.

Action: The beaches at Saddle Dam 1 were completed on November 12, 2011.

Recommendation: Displacement monitoring locations should be established and regularly monitored.

Action: The displacement monitoring will be established during the summer 2012.

SADDLE DAM 2

***Recommendation:* Displacement monitoring locations should be established and regularly monitored.**

Action: The displacement monitoring will be established during the summer 2012.

STORMWATER DIKE

***Recommendation:* No tension cracks were observed during the inspection, but depressions were observed between Sta. 10+700 to 10+900. AEM should to continue monitoring these depressions and for the presence of any tension cracks;**

Action: The depressions will continue to be monitored part of our regular dike inspection.

***Recommendation:* The current method for supporting the tailings pipe at Stormwater Dike has caused damage to the liner. AEM are encouraged to develop and utilize alternative pipe supports or discharge systems to reduce or eliminate potential damage on surrounding permanent structures;**

Action: The method was change and special care is taken to eliminate damage to the liner.

***Recommendation:* Tailings were being discharged through the end of the pipe near the southwest corner of the facility at the time of the inspection. It was noted that the discharge was submerged. The end of the tailings discharge pipe should be above the pond elevation to promote the development of a beach.**

Action: The same day of the inspection, the tailing discharge pipe was change to be above the pond elevation.

AWPR

***Recommendation:* The high water mark on the north abutment of Bridge 5 (R13) was very near the bridge deck level/road at the time of inspection, but it is assumed that following the repair done in October, the north abutment is now higher than it was at the time of inspection. Rigorous monitoring of this crossing is recommended to determine its adequacy in conveying the required flow during the freshet and to measure high water marks and if additional capacity should be installed nearby.**

Action: The repair of the abutment of the bridge 5 (R13) was done in October and the North abutment is now higher of the high water mark. Monitoring will be done during next freshet.

Recommendation: ***For some culvert locations, it is recommended that AEM monitor to see if flow is actually occurring, i.e., during the freshet. If insufficient capacity to handle the flows is observed, then it is recommended to clear the obstructions; particular attention should be paid to PRC-1 (km 0+430), PC-13 (km 12+745), PC-2 (km 13+405), PC-4 (km 14+910), PC-8 (km 29+785), PC-10 (km 36+865), PC-11 (km 39+552), PC-16 (km 55+048), R18-A (km 81+045), R20 (km 85+490) and R-26 (km 104+710).***

Action: The condition of the obstructions at the culverts will be monitored and we will evaluate if their replacement is needed.

Recommendation: Some thin cracks were observed on the crest of the south abutment, near the west edge at the Bridge 2, R05 at about km 17+600. Voids were also observed near the tie-in of the bridge span and bin-wall on the south abutment. Continuous visual observations and monitoring of the cracks and voids is recommended. Stabilization work of the south abutment will be required if cracks and voids continue to progress (open). Neither observation impacts the geotechnical integrity of the bridge or embankments.

Action: Visual observations and monitoring of the cracks and voids will be performed.

QUARRY

Recommendation: ***It is understood that AEM is developing a plan for progressively closing some of the quarries along the AWPR while maintaining others for storage of materials and to provide a supply of materials for ongoing road maintenance;***

Action: For the ongoing road maintenance some quarries will stay open for the duration of the mine life. A plan will be developed in the next two years for progressive closure.

Recommendation: ***Quarry 4 and Quarry 14 are flooded and it is understood that AEM is evaluating how best to eliminate the ponding of water within these quarries, if possible***

Action: The actions necessary to deal with the water and close these quarries will be included in the plan described in the point above.

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BULK FUEL STORAGE FACILITIES

<u>Recommendation:</u> At the Baker Lake fuel tank farm, an exposed liner area (1 m x 0.5 m) was observed on the internal west slope, west of the southern tanks. To minimize potential damage to the liner, it is recommended that protection, either geotextile or granular protection or both, be placed on the exposed liner;

<u>Action</u>: Reparation of the liner will be done during the summer 2012.

<u>Recommendation:</u> At the Baker Lake fuel tank farm, tension cracks were observed on the upper bench, north of Tanks 3 and 4 and south of the Tanks 5 and 6. This may have resulted from the steep side slopes. No mitigation work is required, but regular inspection should be performed to monitor the cracks. Any changes to the cracks (e.g., lengthening, deepening, widening) should be noted and provided to the design engineer. At the time of the inspection, the slope instability observed appeared surficial and was not considered a threat to the lower tanks;

<u>Action</u>: Visual observations and monitoring of the cracks will be performed.

<u>Recommendation:</u> At the Meadowbank fuel tank farm, the side slopes of the tank platform have begun to deteriorate. Ongoing monitoring should be performed to maintain an appropriate distance between the tank perimeter and the pad side slopes.

<u>Action</u>: Reparation of the liner will be done during the summer 2012.

Should you have any questions or require more information, please contact me directly at stephane.robert@agnico-eagle.com or by telephone at 819-763-0229.

Regards,
Agnico-Eagle Mines Limited – Meadowbank Division

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