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

March 6, 2009

Via email and Xpresspost

Mr. Richard Dwyer
Licensing Administrator
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0
867-360-6338

Dear Mr. Dwyer,

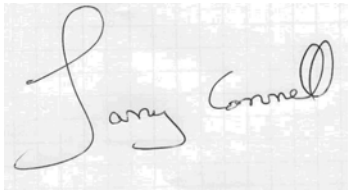
Reference: Meadowbank Gold Project Type A Water License 2AM-MEA0815 - Independent Geotechnical Expert Review Panel Report No.2

As required by Water License 2AM-MEA0815 Part D, Item 2, please find enclosed Report No.2 from the Meadowbank Independent Geotechnical Expert Review Panel (MDRB). Agnico-Eagle Mines Limited – Meadowbank Division has accepted all of the MDRB's findings and has initiated action on these recommendations through our engineering consultants.

Should you have any questions, please contact the undersigned directly at 604-608-2557or via email at lconnell@agnico-eagle.com.

Regards,

Agnico-Eagle Mines Limited – Meadowbank Division



Larry Connell
Corporate Director of Sustainable Development

Encl (1)

February 10, 2009

Mr. Dennis Gourde, P.Eng.
General Manager
Agnico – Eagle Meadowbank Division
Baker Lake Office

Email: denis.gourde@agnico-eagle.com

Dear Mr. Gourde,

Re: Meadowbank Dike Review Board (MDRB)
Report No. 2

1.0 INTRODUCTION

The second meeting of the MDRB was convened in Vancouver on January 8-9, 2009. All three Board members were in attendance. The agenda for the meeting is enclosed as Attachment A. The sequence of the meeting followed the agenda closely.

The objectives of the meeting were as follows:

- to review progress with the completion of the East Dike
- to be briefed on water management and the east pool dewatering
- to review the design status of the Bay Goose dike
- to review the design status of the Stormwater and Saddle dikes
- to review the design status of the Central Dike.

To assist the MDRB in the conduct of its work, the following documents were issued either prior or at the meeting:

i) AEM, 2009. Documents for presentation, Meeting No. 2, January 8-9, 2009.
ii) Golder Associates Ltd. 2008. Report on Tailings Storage Facility, Dike Design, Meadowbank Gold Project, December.
iii) Golder Associates Ltd. 200. Bay-Goose Dike and South Camp Designs, Meadowbank Gold Project, Nunavut, December.
iv) Golder Associates Ltd. Control of Suspended Solids at Second and Third Portage Lakes – Construction of East, South Camp and Bay-Goose Dikes, Meadowbank Gold Project, Nunavut, December. (draft)

DESIGN REPORT

Project staff was debriefed by the MDRB in the afternoon of January 9. A draft of this report was submitted for review on February 10, 2009 and the final version was transmitted on March 6, 2009.

The next meeting of the MDRB is planned for June 12 in Vancouver in order to review final design documents. This meeting is to be confirmed by AEM.

2.0 RESPONSE TO REPORTS No. 1 and 1A

AEM have responded effectively to all issues identified in MDRB Reports Nos. 1 and 1A, either by their actions and/or further discussion at this meeting. There are no outstanding issues.

3.0 EAST DIKE

Past involvement in the design and construction of the East Dike by the MDRB is summarized in Report No. 1, submitted on November 26, 2008; Report No. 1A, submitted by Dr. A. Robertson on November 26 and a teleconference discussing grouting procedures with AEM and Golder staff on December 5.

At this time, dewatering is now planned for March, 2009 indicating a slippage of about three months, compared with the plan last fall. March dewatering is the final date that respects the current business plan.

Since December 5 the primary focus has been in advancing the rock grouting. Casing has been systematically installed to tertiary spacing (1.5 m). Three stages of rock grouting are envisaged, followed by Stage 4, contact grouting through a perforated casing. Based on field trials this appears to be the only practical way forward.

Bedrock grouting is advancing in an effective manner. Procedures are well-defined and monitoring is to a high level. Based on records presented to the MDRB, performance appears good. On a matter of detail, Stage 3 procedure needs to be reviewed with respect to P_{max} and recording the pressure when the volume cutoff is reached, in order to aid interpretation. The MDRB is not convinced that the proposed closure grout criterion is any better than simply plotting the flowrate/time relation in a linearized form and judging that outcome. The MDRB is content that bedrock grouting will be effective as planned and its completion is not critical to the schedule.

However, the contact grouting is a critical element and at this stage it relies on an unproven procedure. The MDRB notes that the perforation will be a slot with variable efficiency. Before fixing procedures, trials are needed. Higher pressures than currently being considered may be appropriate. The MDRB also recommends the consideration of thinner mixes for the contact

grouting. Experimental support optimizing the slot characteristics with the grout mix is needed before procedures can be detailed with confidence.

While contact grouting remains a high priority, confidence in the outcome cannot be assured at this time. While the MDRB supports the completion schedule as proposed, it reminds AEM that a residual risk will remain due to potential erodability in the contact zone and the soil bentonite wall. The primary defence in the design is low gradient. The maximum head across the cutoff wall is 7 m. Secondary contact grouting will be as good as practical within the scheduled time available, but it will be based upon unproven procedures.

4.0 EAST POOL DEWATERING

To accommodate a revised mine plan which increases tailings production to 8500 t/day and life of mine storage requirements to 29.3 Mt, AEM have modified mining and construction within the area occupied by the pool contained by the East Dike. The revised construction requirements impose physical and schedule constraints on pool dewatering. Dike design and construction is addressed in Sections 6 and 7 of this report. In this section dewatering, and water and tailings management aspects of East Pool are reviewed.

The pool contained by the East Dike must be dewatered to permit the construction of:

i) the Starter Divider Dike (identified as the Stormwater Dike in permitting documents), which forms the North Cell of the tailings impoundment;

ii) the Starter Central Dike which forms the South Cell of the tailings impoundment; and

iii) mining of Portage Pit.

The total dewatering volume from East Pool is reported to be 15.3 Mm^3. Of this quantity AEM have assumed that 60% (9.2 Mm^3) will meet discharge TSS criteria and can be discharged directly to Portage Lake and that 40% (6.1 Mm^3) will require TSS management. The stage at which dewatering will exceed TSS discharge concentrations depends on the geometry of the lake shorelines that develop, sediments on these shorelines (and their settling characteristics) and the season - with spring breakup, with high surface flow rates, being a period of particular concern. The 60/40 split is understood to be a value obtained from Diavik experience for which the site conditions may not be equivalent to those at East Pool. The Board recommends that the water management plan and schedule consider potential variation from this split and that contingency management be provided.

Stage 1 – Dewatering to 127 masl and Starter Divider Dike Construction Initiation:

The volume of dewatering required to reduce the East Pool elevation from 133.43 masl to the base of Divider Dike at 127 masl is 6.8 Mm^3.

Dewatering is planned to start March 1, 2009, using three pumps with a capacity of 60,000 m^3/day discharging to Third Portage Lake (3PL) and to continue while the outlet to 3PL

is ice blocked. It is anticipated that 5.5 Mm^3 can be discharged in this manner by May 31. The balance of 1.3 Mm^3 will be evacuated after spring breakup and is scheduled for completion by July 13. The Board notes that the dewatering schedule is constrained with regard to pumping capacity. Further, that during and following spring breakup the potential for TSS concentrations in the East Pond will be high due to the potential for sediment erosion from the exposed lake bottom at lake edges. If dewatering is done from only the south of the sill, on which the Divider Dike will be constructed, there will be high erosive flows over this sill, increasing the potential for TSS. Consideration should be given to:

i) increasing pumping capacity to maximize the amount of dewatering that can be achieved prior to the spring breakup after which erosion potential of exposed lake shores and TSS generation is greatly increased;

ii) pumping from both north and south of the sill at rates which would limit the cross sill flow that could increase erosion.

During the first three months of dewatering to 127 masl most of the downstream slope of East Dike will be exposed. During this period the East Dike will be monitored for performance. The Board is in agreement with the dike instrumentation that has been proposed by Golder Associates (GAL) and AEM for general performance monitoring. However, this array of instruments may not be adequate to locate discrete sources of leakage. Monitoring should include:

i) careful maintenance of the most precise measurement of inflow/outflow and change in storage calculations that can reasonably be achieved;

ii) under-ice visual inspection of water in the vicinity of the toe of the dike for turbidity and signs of internal erosion or piping

iii) evaluate heat pulse instrumentation to determine if it can be implemented in time.

iv) once the downstream toe is exposed, direct seepage monitoring, and potentially remediation, becomes practical.

The Board observes that there is significant risk of dike seepage during the approximately three months of dewatering but considers it acceptable to proceed.

Subsequent Stages:

Following on the Stage 1 dewatering, dewatering will continue to 116 masl to allow Portage pit mining. This requires removal of about 6.1 Mm^3. This elevation also exposes the foundation for the Central Dike. It is anticipated that of this 2.3 Mm3 will not require TSS control and the balance will be treated over 133 days in an Optional Treatment plant at 24,900 m^3/day. Additional dewatering (3.1 Mm^3) of the remainder of the East Pool south cell will occur subsequent to that date prior to tailings placement in the South Cell in 2004.

Stage 1 construction of the Starter Divider Dike has total storage capacity of 4.5Mm^3. Stage 2 construction increases capacity and there is some capacity to temporarily store and clarify dewatering water. The potential to increase capacity could be developed to provide a water management clarification pond.

The Board urges AEM/GAL to advance with greater clarity the water management for subsequent stages which is necessary to establish dike design criteria, capacity, scheduling of raises, need for final height.

Board places emphasis on contingency planning by simple means such as ensuring that the Divider Dike is designed for water storage and has an appropriate maximum capacity.

With regard to tailings distribution and discharge management the Board recommends:

i) Careful consideration be given to tailings distribution/winter operation etc.

ii) Access along all tailings lines is required with redundant discharge lines to ensure that contingencies or mitigation measures are available for frozen lines.

iii) Recognize that glaciation and ice accumulation in beaches reduces average tailings densities and adopt a discharge system to minimize ice entrainment.

5.0 BAY-GOOSE AND SOUTH DIKES

To accommodate the revised current mine plan in which the south end of Potage Pit and Goose Island Pits have been modified and to optimize the dike depths and costs, there has been a revision to the alignment of the Bay Zone and Goose Island dikes. However, the minimum setback distance of 70 m from pit crest to toe of dikes has been maintained.

AEM and its consultants are in the process of final design based on additional bathymetric and other information that has been gathered and relies on obtaining yet further geotechnical information along the dike alignment for completion. The Board does not anticipate any substantive changes from this next campaign of investigation and approves of the design as proposed with the following comments for consideration:

a) South Dike – this is a simple structure of acceptable design and winter construction should be maximized to reduce potential of turbidity in adjacent lakes.

b) Bay-Goose Dike

   i) Design criteria are similar to those for East Dike and are therefore accepted

   ii) Minor design changes that have been made from the original layout and design result in improved constructability

   iii) Both SB and cement-bentonite (CB) cut-off walls are being considered and for “Shallow” depths :

- the final choice will be dependent on the East Dike performance observed during dewatering, and
- AEM will proceed to bid on both types with the final decision to made after the East Dike experience and additional geotechnical drill information is evaluated.

iv) For the "Medium" depth cut-off:

- Board agrees that cut-off should be CB (cement-bentonite) or CSB (cement-soil-bentonite)
- Board prefers cut-off taken to rock
- Board recommends GAL evaluate alternative methods for cut-off construction, including:
  - Long stick excavation
  - Bauer DSM (deep soil mixing)

v) The schedule for construction needs evaluation with particular review of the crusher capacity and camp constraints.

vi) The Board agrees that more geotechnical data is needed for optimization and support of contractor bids but is of the opinion that the program, as proposed, can be reduced to fit schedule constraints. It recommends that consideration be given to sonic coring to expedite completion.

vii) The Board was advised of measures proposed by AEM to improve turbidity control practice and suggests that consideration be given to consultation of an additional expert in turbidity control.

viii) Board accepts setback as per GAL analyses but requests AEM summary of implementation of recommendations with respect to mapping monitoring, drainage, depressurization, and TARP

ix) Board is concerned regarding air flush drilling in setting of casing for grouting and the potential for damage to the cut-off wall if air pressures cause breakout to the adjacent high permeability fill. It recommends a change to this practice; or that a test/evaluation program be completed to demonstrate that damage is not occurring.

6.0 STORMWATER (DIVIDER) DIKE

6.1 New Function

At the time of the first meeting, the Board was advised of the possible change in the role of the Stormwater Dike for reasons of schedule and dewatering constraints as outlined above in Section 4. This change is now confirmed and design changes have been required.

Essentially the location remains the same with minor alignment adjustment to suit the recent bathymetrical data.

Whereas the previous design called for an impermeable membrane on the south side to retain tailings water and prevent the contamination of run-off collected in the north basin, the new function requires that tailings be stored, at least initially in the north basin. Consequently, the impermeable element of the dike has been transferred from the south face to the north face.

6.2 Design Criteria

The Stormwater Dike shares the same basic design criteria as the central dike and the saddle dikes. In some respects, this dike can be considered as a temporary structure as it will eventually be buried within the tailings deposit. However, until completion of the Central Dike, it will retain water and tailings which would otherwise enter the Portage pit. For a period of time it will also separate tailings and supernatant water from the water which could be pumped to the lake without chemical treatment.

The Board is of the opinion that the design criteria (other than long term closure aspects) should be consistent with those of the Central Dike. In addition, there is a need to consider the potential ice loading on the thin geomembrane which constitutes the impermeable barrier. This loading is derived from:

- Impact of floating ice sheets;
- Thrust from expanding ice;
- Drag of cover material during changes in the pond elevation (upward or downward).

6.3 Design

The Board concurs with the design as proposed, that is a rockfill embankment with transition zone(s) and an impermeable liner. The upstream slope has been flattened to 1V:3H to facilitate construction of the transition layers and liner placement. However, the Board questions the lack of a fine filter beneath the liner. It is also noted that the specification calls for the rockfill to be placed in 3m layers with only nominal compaction by the hauling equipment.

At the present time, a Coletanche bitumen based liner is proposed. These liners, relatively robust for installation, have more limited extensibility than HDPE or PVC liners and adequate support is essential. Foundation conditions, rockfill selection and placement, need for compaction, gradation of transition zones and prevention of segregation must all be considered prior to making the final selection.

The liner will be keyed into a trench taken to rock at the upstream (north) toe of the embankment. The depth of overburden to be excavated could exceed 8m (thickness at borehole 02GT-07). Additional investigations are proposed and this is appropriate. The rock will be grouted, which poses no major problem in the talik area but permafrost at the abutments will have to be taken into account. For reasons of thermal stability, it may be of interest to explore the possibility of locating the cut-off beneath the embankment rather than at the toe. Tailings deposition strategy and the pond location also merit detailed analysis to:

- Reduce water (and ice) against the liner;
- To improve thermal stability;
- To facilitate access to pipelines and spigot points during winter operation.

It is appreciated that spigotting from the north will increase potential tailings capacity but the other considerations may influence the final strategy.

6.4 Construction Staging

The initial crest elevation, and the timing and height of subsequent raises should be clearly spelled out in the design report and operations manual. Pond capacity for tailings and water management roles has to be considered. A freeboard of 1m above tailings/pond is provided. This may be only just adequate to prevent wave overtopping if water is ponded against the dike in the period immediately prior to dike raising.

7.0 CENTRAL DIKE

While the general location and dike type are unchanged from the version presented at the previous meeting, bathymetric data, geotechnical conditions and the Portage pit geometry have led to design changes. The alignment at the East (left) abutment has moved upstream. A flatter upstream slope is also included for this dike, again for reasons of constructability.

Further exploration is proposed in the vicinity of the toe to optimize the cut-off and liner tie-in to bedrock. A central location is also still under consideration though this may imply the use of a diaphragm wall cut-off.

As for the other structures the potential impact of ice loading should be included in the design criteria.

As this dike is the primary structure for the retention, in perpetuity, of the tailings, it is recommended that the earthquake return period for seismic design be revised to reflect practice elsewhere. A return period of 10,000 yrs has been adopted in other jurisdictions for mine closure and would be considered good practice. In an area of low seismic activity this approach may not imply any significant impact on the design.

To advance the final design, the Board recommends the following actions:

- Clarify the construction staging with respect to the water/tailings containment;
- Review the application of Coletanche liner. As mentioned for the Stormwater dike, the adequate support of the liner is paramount. This will dictate the specifications for foundation acceptance, for the construction materials, thickness of filters, and the degree of compaction. The adverse slope of the foundation from downstream to upstream will lead to the ponding of run-off and seepage water in the embankment. An upstream weighting zone is foreseen to counteract the hydrostatic uplift on the liner but consideration must also be given to the effect of submergence on the supporting rockfill below the liner (particle breakage, increased settlement and fines migration even without water flow).

- The upstream slope of the foundation will also complicate the dewatering required during cut-off trench excavation, foundation preparation, and liner placement, until such time as the weighting zone is placed. There may be a need to provide more space between the toe of the upstream slope and the cut-off trench to position dewatering sumps. The pump operation may be required even after liner installation and a detail should be provided for liner sealing around such sumps and the subsequent grouting of the same.
- The fine filter is specified as having a maximum particle size of 80mm and a fines (<0.08 mm) content of 5-8%. To ensure minimal damage to the liner, the maximum size could be reviewed with possible reduction to 56 mm. The fines content has been selected by analogy with concrete faced rockfill dams (CFRD). The semi-pervious nature of this material would indeed reduce flow and the transport of tailings in the event of liner puncture but consideration should be given to the construction aspects. The upstream slope of a CFRD is usually protected from rainfall erosion prior to construction of the facing. A bituminous emulsion spray or extruded concrete curbs are used for this application.

The Board supports the proposal for additional investigations and studies, and looks forward to the opportunity to review the detailed design at a later date.

8.0 SADDLE DIKES

The saddle dikes (SD-1 to SD-6) are required to complete the enclosure of the tailings storage facility. Their design cross-sections are similar to those of the Stormwater and Central dikes insofar as rockfill embankments are sealed with impermeable membranes anchored into a cut-off trench at the upstream toe. It is planned to take this trench down to rock but grouting will not be feasible due to the frozen ground (permafrost). The presence of water and/or tailings may lead to long term degradation of the frozen barrier and remedial grouting is considered a possibility with drilling through the tailings beach.

Consideration should be given to any benefit that may arise from the location of the cut-off beneath the embankment instead of at the toe and also from the tailings deposition pattern to minimize the period of open water against the dikes.

The issues raised for the Stormwater dike and the Central dike with respect to ice loading on the liner and earthquake criterion for closure are also applicable for these structures.

Boreholes in the vicinity of the Stormwater dike abutments indicate that overburden thicknesses may be small for the saddle dikes but the planned additional investigations are appropriate.

9.0 ADDITIONAL COMMENTS

The Board again wishes to note that the construction activities in 2009 will take place on several fronts and with intensity not less than that of 2008. The need for close supervision of the work which is critical to ensure good performance cannot be overemphasized. Adaptation of designs to the exposed foundation conditions is to be expected and must be accomplished in a timely manner. AEM will be going out to tender for the 2009 work and the requirement for good collaboration with the eventual contractor must be clearly stated and encouraged through the appropriate contractual conditions.

In addition, a few items were noted in the specifications included with the TSF dike design report which may warrant review. These are:

1. The responsibility of the "Owner" for foundation preparation and embankment and the "Contractor" for the filters and liner installation leads one to wonder how responsibility for performance is to be established.
2. The excavation of the cut-off trench and the placing of the concrete mat is the responsibility of the "Contractor". It should be clear that the "Owner" is not responsible for foundation preparation in this instance.
3. The maximum depth for grout hole drilling of 50m is inconsistent with the planned treatment of the Second Portage Fault down to 100m. (It is interesting to note that the use of "air flush" is prohibited by the specification but an air powered down-the-hole hammer was used at the East Dike)
4. The instrumentation section does not include a specification for the piezometer cables though direct burial and water block cable is required for the thermistors.
5. The data acquisition section makes no mention of back-up power nor whether radio communication is required for remote interrogation, reading frequency adjustment and alarm capability.

10. FUTURE MEETINGS

1. Design review meeting in June, according to progress with studies and tender packages. Review of behaviour during dewatering of the East dike also on the agenda. Location - probably Vancouver.
2. Site visit in July (20-24 to be confirmed). It is anticipated that the foundation of the Stormwater dike will be exposed and that work will be underway on the Bay-Goose dikes.

11.0 ACKNOWLEDGEMENTS

The Board again wishes to thank the staff of both AEM and Golder Associates for the informative presentations during the course of the meetings and to all participants for their valuable contribution to the discussions.

Norbert R. Morgenstern, P.Eng

D. Anthony Rattue, P.Eng.

Andrew M. Robertson, P. Eng.

ATTACHMENT A

AGENDA FOR BOARD MEETING NO. 2

JANUARY 8-9, 2009

AGNICO EAGLE

MEADOWBANK

VANCOUVER MEETING

JANUARY 8-9, 2008

Attendance		
Gaston Blanchette	AEM	Dike Engineer
Larry Connell	AEM	Reg. Manager Environment & Govt.
Denis Gourde	AEM	General Manager
Stephane Robert	AEM	Environment Superintendent
Cameron Clayton	Golder	
John Cunning	Golder	Senior Technical Review
Fiona Esford	Golder	
Nicholas Lauzon	Golder	
Ben Wickland	Golder	Dike Design
Norbert Morgenstern	Self	Dike Review Board
Anthony Rattue	SNC Lavalin	Dike Review Board
Andrew Robertson	Robertson Geoconsultants	Dike Review Board