



# NUNAVUT WATER BOARD

## REASONS FOR DECISION INCLUDING RECORD OF PROCEEDINGS

In the Matter of:

Applicant: Agnico-Eagle Mines Limited

Subject: Application for Type "A" Water Licence

Date: June 9, 2008

Precedence: Where there is any inconsistency or conflict between the *Nunavut Land Claims Agreement* and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act (NWNSRTA)*, the Agreement prevails to the extent of the inconsistency or conflict. Where there is any inconsistency or conflict between the *NWNSRTA* and any other *Act* of Parliament, except the *Nunavut Land Claims Agreement Act*, the *NWNSRTA* prevails to the extent of the inconsistency or conflict.

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## RECORD OF PROCEEDINGS

Applicant: Agnico-Eagle Mines Limited

Address: Suite #950 – One Bentall Centre  
Box 72 – 505 Burrard Street  
Vancouver, BC V7X 1M4

Purpose: Application for Type “A” Water Licence for the Meadowbank Gold Mine

Application Received: March 31, 2003

Date(s) of Hearing: Day 1: April 15, 2008  
Day 2: April 16, 2008

Members Present: Lootie Toomasie, Hearing Chair      George Porter, Member  
Guy Kakkiarniun, Member      Tommy Tatatuapik, Member  
Robert Hanson, Member (by telephone)

Board Staff: Executive Director      D. Filiatrault, P. Eng.  
A/Director Technical Services      D. Hohnstein, C.E.T  
Licence Administrator      R. Dwyer  
Hearing Coordinator      D. Carr, B.Sc.  
Board Secretary/Interpreter      B. Kogvik  
BGC Consulting Limited      J. Seto, P. Eng.  
Tunaley, Lines and Associates      K. Tunaley  
S. Lines

Interpreter(s): Inuktitut  
• M. Hunt, Rhoda Perkison

NWB Legal Counsel: W.A. Tilleman (by telephone), C. Emrick

Court Reporter: K. Schumann, CSR(A)

Sound Technician: T. Bourque, Pido Productions

Applicant: Agnico-Eagle Mines Limited (AEM)  
• L. Connell, Manager of Environment, Social and government Affairs  
• S. Doire, Mine Site Environmental Coordinator  
• R. Vanengen, Mine Site Environmental Coordinator

- R. Gould, Environmental Manager of Permitting and Compliance Monitoring
- S. Robert, Environmental Engineer

#### AEM Consultants

- D. Walker, Golder Associates
- T. Eldridge, Golder Associates
- V. Bertrand, Golder Associates
- G. Mann Azimuth Consulting
- J. Donihee, Legal Counsel

#### Parties:

##### Indian and Northern Affairs Canada (INAC)

- M. Nadler, Regional Director General, Nunavut
- J. Rogers, Manager Water Resources
- K. Landa, Legal Counsel-Justice Canada
- K. Armstrong, Technical Specialist

##### Nunavut Tunngavik Incorporated (NTI)

- J. Ehaloak, Environment Coordinator

##### Kivalliq Inuit Association (KIA)

- L. Manzo, Director of Lands
- S. Hartman, Environmental and Water Officer, KIA Lands Department
- J. Lindell, Land Use Inspector

##### KIA/NTI Legal Counsel

##### Environment Canada (EC)

- A. Wilson, Water Pollution Specialist
- G. Groskopf, Mining Issues Specialist

##### Department of Fisheries and Oceans Canada (DFO)

- A. Liu, Habitat Habitat Biologist
- D. Balint, Habitat Management Biologist

##### Government of Nunavut – Department of the Environment (GN-DOE)

- E. Baddaloo, Director of Environment Protection
- H. Yeh, Manager of Environmental Assessment and Land Use

## **BACKGROUND AND REGULATORY HISTORY**

For purposes of these Reasons for Decision and all documents submitted to the public record in relation to this application for a Type “A” water licence for the Meadowbank Gold Mine (Application), the terms Agnico-Eagle Mines Limited (AEM or Agnico) as the current Applicant, and its predecessor Applicant, Meadowbank Mining Corporation (MMC), a wholly owned subsidiary of Cumberland Resources Ltd. (Cumberland), all mean the same entity as the current Applicant.

MMC began actively exploring the Kivalliq region approximately 70 km north of the Hamlet of Baker Lake in 1995. Engineering, environmental baseline studies and community consultations have paralleled the exploration programs and have been integrated to form the basis of the current Meadowbank Gold Mine Project (Project) design.

The Project represents the construction, operation, maintenance, reclamation, closure and monitoring of an open pit gold mine located on Inuit-owned land in the Kivalliq Region of Nunavut. The Project consists of several gold-bearing deposits within relatively close proximity to one another. The three main deposits are: Vault, Portage (including the Third Portage deposit, and the Connector Zone and North Portage deposit), and Goose Island.

The open pit mineral reserve is estimated at 3.5 million ounces of gold, with annual average production of between 350,000 to 400,000 ounces per year recovered at a rate of 8,500 tonnes per day. The gold will be extracted from three separate open pits during the eight-to-ten-year operational lifespan of the mine. Water retention dikes will be constructed from mined rock to allow for the mining of ore beneath shallow lakes. Tailings and waste rock will be placed in separate storage facilities. Upon conclusion of mining, AEM will fully decommission the mine, including the off-site All Weather Private Access Road, and Baker Lake Marshalling Facility.

Environmental baseline studies have been conducted in the project area for hydrology, permafrost, groundwater, water quality, sediment, geochemistry, lake bathymetry, biology and engineering studies. To facilitate mine operations, AEM will be required to withdraw and divert water from surrounding lakes, and from areas within the mine footprint, and to handle, manage and treat waste.

### **Land Use Planning**

On April 23, 2003, the NWB acknowledged receipt of the Application from Cumberland and forwarded the project proposal to the Nunavut Planning Commission (NPC) for determination in accordance with Article 11 and section 11.5.10 of the Nunavut Land Claims Agreement (NLCA).<sup>1</sup> On July 18, 2003, the NPC completed a review of the

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<sup>1</sup> Letter from Phyllis Beaulieu, NWB, to Brian Aglukark, NPC, dated April 23, 2003.

project proposal and determined that it conformed<sup>2</sup> to the Keewatin Regional Land Use Plan.<sup>3</sup>

### Impact Review

On March 31, 2003, Cumberland submitted a project description for the Project to the Nunavut Impact Review Board (NIRB). On September 23, 2003, NIRB issued a screening determination pursuant to section 12.4.4(b) of the NLCA.<sup>4</sup> On December 3, 2003, the Minister of Indian and Northern Affairs Canada (Minister) concurred with NIRB's screening determination and referred the Project to a Part 5 environmental impact review under Article 12 of the NLCA.<sup>5</sup>

On August 30, 2006, NIRB forwarded a positive impact review decision to the Minister pursuant to section 12.5.6(c) of the NLCA. On November 17, 2006, pursuant to section 12.5.7 of the NLCA, the Minister approved NIRB's recommendation. Project Certificate NIRB No. 004 (Project Certificate) was issued on December 30, 2006, to MMC.

Sections 12.9.1 and 12.9.2 of the NCLA require the NWB to implement the terms and conditions of the Project Certificate in accordance with the Board's authorities and jurisdictional responsibilities by incorporation, where applicable, into the Type A water licence.

### Regulatory History

Following consultation with interested parties, on March 14, 2007, pursuant to section 48(3) of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSTRA or Act), the NWB issued the *Nunavut Water Board Preliminary Guidelines for Applicant – Cumberland Resources Limited – Meadowbank Project dated March 14, 2007* (Guidelines) to MMC.<sup>6</sup> On September 4, 2007, AEM submitted a revised Application and supporting documentation in fulfillment of the requirements of the Project Certificate and Guidelines.<sup>7</sup>

Following clarification of administrative details related to the amalgamation of AEM and MMC,<sup>8</sup> the NWB acknowledged receipt of all documents filed by AEM and directed parties to confirm completeness and concordance to the Project Certificate and

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<sup>2</sup> Email from Brian Aglukark, NPC, to Phyllis Beaulieu, NWB, dated July 18, 2003.

<sup>3</sup> Nunavut Planning Commission - Keewatin Regional Land Use Plan, dated effective June 20, 2000.

<sup>4</sup> NIRB Screening Decision from Elizabeth Copeland, NIRB, to Minister R. Nault, INAC, dated September 23, 2003.

<sup>5</sup> Letter from Minister R. Nault, INAC, to Elizabeth Copeland, NIRB, dated December 3, 2003.

<sup>6</sup> Letter from P. di Pizzo, NWB, to Craig Goodings, AEM, Subject: Preliminary Guidelines – Application for a Water License Meadowbank Gold Project, dated March 14, 2007.

<sup>7</sup> Letter from Richard Dwyer, NWB, to Louis Grondin, AEM, Re: Application Acknowledgment for the Meadowbank Project, dated September 20, 2007.

<sup>8</sup> Letter from Louise Grondin, AEM, to Richard Dwyer, NWB, Re: Type A Water Licence Application in the name of the correct Applicant, dated September 24, 2007.

Guidelines by November 2, 2007.<sup>9</sup> The Board confirmed with AEM on November 13, 2007, that submissions on completeness and concordance were received from the following interested parties: Government of Nunavut - Department of Environment (GN-DOE); Environment Canada (EC); Fisheries and Oceans Canada (DFO); and Indian and Northern Affairs Canada (INAC).<sup>10</sup>

At that time, the Board requested AEM provide clarification and confirmation of their ability to respond to the deficiencies identified by the Parties and a timeline for the provision of requested supplemental information.<sup>11</sup> Clarification was provided by AEM during a meeting of NWB staff and AEM in Yellowknife on November 21, 2007. At the meeting, it was determined that AEM was required to confirm with NIRB whether an amendment to the Project Certificate was required to satisfy conditions No. 8 and No. 17.<sup>12</sup>

On November 27, 2006, NIRB advised the NWB of a determination that Project Certificate Condition No. 17 need not be amended, provided the NWB:

- is satisfied that AEM has carried out a detailed technical review of the dike and pitwall designs for the Goose Island Dike and the result of expert analysis of the Goose Island Dike is a recommendation that the final design be deferred until the completion of the construction of the East and Bay Zone dikes; and
- is prepared to condition any water license it may grant for the Meadowbank Project to require the submission of a detailed technical review and expert analysis of the final design for the Goose Island Dike prior to commencement of construction of the Goose Island Dike.<sup>13</sup>

The NWB advised NIRB that the above requirements could be met.<sup>14</sup> NIRB further advised the NWB that NIRB had determined that Project Certificate Condition No. 8 need not be amended.<sup>15</sup> On November 26, 2007, AEM further confirmed to the NWB that NIRB conditions No. 8 and No. 17 did not require further screening from the NIRB and that no changes were required to the Project Certificate.<sup>16</sup>

Additionally, on November 23, 2007, AEM confirmed an understanding to incorporate Type B licences 8BC-MEA0709 and 8BC-TEH0708 into the Type A water licence

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<sup>9</sup> Letter from Dionne Filiatrault, NWB, to Louise Grondin, AEM, Re: Final Acknowledgement of Application for Type 'A' Water Licence, dated October 4, 2007,

<sup>10</sup> Letter from Dionne Filiatrault, NWB, to Larry Connell, AEM, dated November 13, 2007.

<sup>11</sup> Letter from David Hohnstein, NWB, to Larry Connell, AEM, Re: Notification of submissions, dated November 13, 2007.

<sup>12</sup> Letters from Larry Connell, AEM, to Jeff Rusk, NIRB, Re: NIRB condition No. 8 and No. 17, dated November 23, 2007..

<sup>13</sup> Letters from Jeff Rusk, NIRB, to Larry Connell, AEM, Re: Requests to amend Meadowbank Project Certificate No. 004 Condition No. 8, dated November 27, 2006, and Re: Timing of Inclusion of 2007 Groundwater Monitoring Results in the Meadowbank Type A Water License Application for the NWB and Condition No. 17 Technical Review of All Dikes and Pit Slopes, dated December 30, 2006,

<sup>14</sup> Letter from Dionne Filiatrault, NWB, to Larry Connell, AEM, dated December 10, 2007.

<sup>15</sup> Letter from Jeff Rusk, NIRB, to Larry Connell, AEM, dated November 29, 2006.

<sup>16</sup> Letter from Larry Connell, AEM, to Dionne Filiatrault, NWB, dated November 26, 2007.

process.<sup>17</sup> The Board's decisions in relation to outstanding applications for the Type B water licenses are dealt with in separate decisions of the Board, and attached for information as Appendices C and D of this Decision.

Following a detailed review of the Application and the comments received from interested parties, the NWB determined that the Application was complete and provided confirmation to AEM of compliance/conformity of the Application to the NWB's Preliminary Guidelines.<sup>18</sup>

On December 10, 2007, the Board confirmed receipt of a letter from AEM proposing an accelerated schedule for the water licence regulatory review process.<sup>19</sup> The Board accepted the accelerated schedule to the extent possible given the Board's schedule, work plan and legislative requirements, and with the continued onus on AEM to submit to the Board, full concise information appropriately incorporated into the application on a timely basis.<sup>20</sup> At that time, the Application was forwarded to interested parties to begin a detailed technical assessment.

On January 25, 2008, the Board issued a Notice of Application and a Notice of Public Hearing commencing on April 15, 2008, in Baker Lake.<sup>21</sup>

The NWB held a technical meeting and a Pre-Hearing Conference (PHC) on February 26 and 27, 2008, in Baker Lake.<sup>22</sup> At the technical meeting INAC, EC, DFO, GN-DOE, Nunavut Tunngavik Incorporated (NTI) and the Kivalliq Inuit Association (KIA) provided submissions to the PHC, including their information requirements. AEM committed to providing the required information. The NWB prepared a formulation of issues to aid in the simplification and disposition of the technical issues to be assessed at the PHC.<sup>23</sup>

One of the main issues for consideration by the Board staff, AEM and the parties was the impact and clarification regarding the Type B water licences,<sup>24</sup> held by AEM for the

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<sup>17</sup> Letter from L. Grondin, AEM, to D. Filiatrault, NWB, re: Application for Type B water Licence for the Baker Lake Tank Farm and Marshalling Area, dated July 19, 2007.

<sup>18</sup> Letter from Dionne Filiatrault, NWB, to Larry Connell, AEM, dated December 10, 2007.

<sup>19</sup> Letter from Larry Connell, AEM, to Dionne Filiatrault, NWB, dated November 26, 2007.

<sup>20</sup> Letter from Dionne Filiatrault, NWB, to Larry Connell, AEM, dated December 10, 2007.

<sup>21</sup> Formal notice was issued pursuant to section 55(2) of the NWNSRTA.

<sup>22</sup> Pre-hearing, Technical Meeting Agenda provided to Larry Connell, AEM and the Parties on February 8, 2008.

<sup>23</sup> See letter from Dionne Filiatrault, NWB, to Meadowbank Distribution List, Subject: Pre-Hearing Conference for Agnico-Eagle Mines Ltd. Meadowbank Gold Project application for Type A Water License, Appendix B, dated March 5, 2008.

<sup>24</sup> AEM holds the following Type B water licenses:

- 1) 2BE-MEA0813 licence to allow for exploration activities, mineral exploration, prospecting, geological mapping, geophysical survey, diamond drilling, fuel vault installation, airstrip construction, trenching, baseline data collection and camp operation issued on February 13, 2008, and expires on February 28, 2013;
- 2) 8BC-TEH0708 licence to allow for construction of a 100 km private access road from Baker Lake to Tehek Lake issued on February 16, 2007, and expires on February 8, 2008;

Baker Lake Marshalling Facility and the All Weather Private Access Road. AEM also submitted an application for amendment to AEM exploration licence 2BE – MEA0813 received by the Board on February 1, 2008, to allow for pre-development work in relation to the Meadowbank mine.

The application to amend the exploration licence was subsequently withdrawn by AEM with preference to have the exploration licence remain separate from the Meadowbank mine facility Type A licence.<sup>25</sup> AEM then submitted an application for renewal and amendment to 8BC-TEH0708 (to be incorporated into the applied for Type A licence) to allow for pre-development work for the Meadowbank mine, including:

- The construction and operation of a camp with associated domestic water use of 45 m<sup>3</sup>/day;
- Operation of a sewage treatment plant for a maximum flow rate of 45 m<sup>3</sup>/day with the discharge to Tear Drop Lake, a non-fish bearing water body;
- Operation of Tear Drop Lake as a storm water management pond with an allowable discharge standard for water overflowing the pond;
- Operation of a batch concrete plant with a maximum water use of 15 m<sup>3</sup>/day;
- Pre-development stripping and stockpiling of ~2.8 M tonnes of overburden for preparation of the north and south portage starter pit; and
- Initial rock drilling and blasting of rock in the north and south Portage starter pits to provide an in-situ stockpile of construction rock to build the East Dike starting July of 2008.<sup>26</sup>

In its Pre-hearing Decision,<sup>27</sup> the NWB set out that issues presented to the Board at the Public Hearing are to be generally classified into the following categories:

- 1) Nunavut Impact Review Board Schedule 12.4.3 Determination;
- 2) Type B Water Licence Applications;
- 3) Term of licence;
- 4) Type and amount of security;
- 5) Compensation Agreements;
- 6) Construction;
- 7) Geotechnical and permafrost issues;
- 8) Water use;
- 9) Water management/Water quality;
- 10) Waste management;

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- 3) 8BC-MEA0709 licence to allow for construction, operation and decommissioning of a Tank Farm and Marshalling Area in Baker Lake issued on August 12, 2007, and expires on December 31, 2009.

<sup>25</sup> Letter from L. Connell, AEM, to R. Dwyer, NWB, Reference: 2BE-MEA0813 - Meadowbank Project Application for Amendment of the Meadowbank Exploration Project Type B Water License, dated March 4, 2008.

<sup>26</sup> Summarized from letter from L. Connell, AEM, to R. Dwyer, NWB, Reference: 2BE-MEA0813 - Meadowbank Project Application for Amendment of the Meadowbank Exploration Project Type B Water License, dated March 4, 2008.

<sup>27</sup> Letter from Dionne Filiatrault, NWB, to Meadowbank Distribution List, Subject: Pre-Hearing Conference for Agnico-Eagle Mines Ltd. Meadowbank Gold Project Application for Type A Water License, dated March 5, 2008.



- 11) Geochemistry;
- 12) Tailings storage facility;
- 13) Contingency planning;
- 14) Monitoring;
- 15) Closure and reclamation; and
- 16) Other issues

Further, in consideration of several time constraints and following consultation with parties at the PHC, the NWB requested that parties submit written interventions for the Final Hearing no later than March 31, 2008. Written interventions were received from the KIA, NTI, INAC, EC, DFO and GN-DOE. The Public Hearing was held on April 15 and 16, 2008, in Baker Lake.

### **Summary of Final Hearing Submissions of the Parties**

#### **Nunavut Tunngavik Incorporated and Kivalliq Inuit Association**

NTI and KIA participated jointly in the review of the Project. KIA is the representative of Kivalliq Inuit and the Designated Inuit Organization (DIO) for purposes of Article 20 of the NLCA. KIA is the owner and has water rights and management authorities of the Inuit Owned Land (IOL). KIA's role in the Project relates to NLCA: Article 6, wildlife compensation; Article 19, licensing and permitting; Article 20, water compensation; and Article 26, Inuit Impact and Benefits Agreement (IIBA).

KIA submitted that an IIBA and a water compensation agreement pursuant to Article 20 of the NLCA have been signed with AEM. Benefits in the form of training and staffing since the signing of the IIBA have begun to positively impact many of the communities within the Kivalliq Region.

KIA and NTI submitted that technical reviews identified a number of areas of design and operating concerns, including the dewatering dike, central dike and tailings area design, potential for acid rock drainage, metal leaching in waste rock, tailings, and water quality predictions. KIA and NTI advised the Board that they are generally satisfied that these concerns have been sufficiently addressed through monitoring and implementing adaptive engineering.

KIA and NTI submitted that an independent dike safety review committee is to be formed by AEM to monitor all aspects of dike performance during the construction and mine life. The committee is to consist of qualified technical people charged with the review and comment on any deficiencies found in the design, construction material, and during the mine operation. KIA recommends that the dike safety review committee be required to provide quarterly reports to the stakeholders outlining any design changes and adaptive engineering that has been implemented during construction and operation. KIA further submitted that it has retained the right to place a qualified technical person of their choosing on the dike safety review committee.

KIA and NTI submitted that AEM must be required to closely monitor the thermal seepage and water quality characteristics of the mine waste storage areas. It is recommended that a plan to address the worst-case scenario should be prepared and include the implementation of design changes and adaptive engineering if monitoring indicates contaminants are negatively impacting the environment.

KIA and NTI submitted that the abandonment and restoration plan submitted by Meadowbank is sufficient. KIA recommends that AEM provide an annual revised abandonment and restoration plan for each year of construction and operation. The updated plan should incorporate design changes and adaptive engineering required and implemented during construction and on the basis of actual site conditions and monitoring results over the life of the project.

KIA acknowledged the right of the NWB to require AEM to furnish and maintain security for the Project. KIA further submitted that as the owner of Inuit lands upon which the project will be constructed, KIA is entitled to hold security pursuant to its lease with the Proponent to protect against the risks posed by the project to Inuit owned land. KIA supports earlier decisions of the NWB that security should not be divided between land and water, and that all parties' interests would be best served if there was one security held jointly by KIA and the Minister.

KIA submitted an estimate of \$43.461 million for reclamation security. While preferring to approach reclamation holistically, in the absence of KIA reaching an agreement with INAC on how security is held, KIA recommends that the NWB order water related security payable under the water licence such that the Crown will hold security for water related reclamation and KIA will hold land-related security through the surface lease. In order to meet its priority of protecting Inuit interests, KIA advised that it intends to hold \$14.79 million in security via the land lease with AEM despite such an approach potentially causing AEM to be “double bonded.”

### **Indian and Northern Affairs Canada**

INAC's mandate to participate in the review of AEM's Application is derived from the *Department of Indian and Northern Affairs Act*, the *NLCA*, *Territorial Lands Act and Regulations*, the *NWNSRTA*, as well as the *Mine Site Reclamation Policy for Nunavut*. INAC's review focused on issues within its mandate, including surface and permafrost disturbance, water quality and quantity assessment, waste management, monitoring and abandonment and reclamation.

INAC submitted recommendations for reporting on a number of matters related to the management of the Project, including monitoring the geotechnical/permafrost stability of project structures; monitoring the water balance and water quality model; geochemical monitoring; waste rock management; waste water management; solid waste management; and closure and reclamation conditions.

INAC recommends the NWB require as a condition of the licence, as-built topographic surveys together with thermal/deformation/seepage instrumentation monitoring results compared to predicted performance and site inspection program results in AEM's annual

report. INAC further recommends additional geotechnical investigations of foundation conditions as a requirement for any retention structure where the loss of contained fluids or materials would negatively influence water quality. A comprehensive geothermal analysis should be completed for any designs where permafrost is a design component necessary for adequate performance of the structure and/or where either freezing or freeze/thaw could be a detracting feature of the design.

INAC submitted that AEM has addressed many of INAC's issues related to water quantity and quality. INAC recommends that AEM collect climate and hydrological data as part of its ongoing monitoring program and incorporate collected data into the water balance and water quality model. INAC further recommends that AEM submit a water balance and water quality modeling report and recalibrate the model as necessary every three months for the initial two years of mine operation, and annually thereafter.

INAC submitted that AEM should identify all waste rock by general lithology and location relative to its placement to allow for AEM and the NWB to understand the type of waste rock and provide a basis for investigating the source of acid rock drainage should such drainage occur. INAC recommends that the appropriate thickness of non acid-generating waste rock material to be placed as cover over the waste rock facility and tailings storage facility to protect the environment, be tested during operations, with an annual report of the results of the testing submitted to NWB.

INAC further recommends that AEM provide annually a geochemical monitoring and waste rock storage report to present and interpret data associated with tailings solids, tailings supernatant, cyanide leach residue, bleed from the cyanide destruction process, and waste rock, and to assess the quality and quantity of leachate produced within the project area and to determine its effects on the receiving environment. INAC further recommends that reporting of any geochemical outcomes or observations that could imply or lead to environmental impact should be reported to the NWB within seven days of observation.

INAC submitted that it supports AEM's proposed use of a landfarm facility to remediate fuel-contaminated soils provided the facility is maintained and monitored to ensure it is performing as intended and landfarm discharges are monitored for daily flow. Regarding sewage treatment, INAC recommends that the sewage treatment plant treatment capabilities be analyzed throughout operations to ensure that they are meeting effluent quality requirements and industrial waste discharge criteria established in the Nunavut Department of Sustainable Development's Guidelines for Industrial Waste Discharge of 2002. Further, INAC recommends that AEM monitor liquid seepage from solid waste management sites and report the results to the NWB in the annual report.

As ash and other particulate material remaining after incineration will be placed in the landfill and may become sources of leachate, INAC recommends that AEM provide a clear indication of the materials to be burned and the efficiency of the incinerator, and emissions used to indicate what types of byproducts are formed within the incinerator.

INAC recommends that AEM submit an Interim Closure and Reclamation Plan not later than six months after the start of mining and a Final Closure and Reclamation Plan no later than 12 months before the expected end of mining for review and approval by the NWB.

INAC estimates total potential abandonment and reclamation costs for the Project at \$26.105 million at the end of Year 5, and \$43.8 million at the end of mine life. INAC recommends the Board order water related security only, initially in the amount of \$7.625 million; by the beginning of year 5 of the mine's operation at \$15.841 million, and by year 7 or as the end of the mine life approaches \$29.084 million, be held by the Minister. INAC submitted that this would facilitate landowners' negotiation of land related security directly with AEM.

INAC submitted that it supports the incorporation of the activities and operations currently covered under the two Type B water licenses for the All Weather Private Access Road and the Baker Lake Marshalling Facility into the Type A water license, provided the conditions of existing licenses are transferred to the Type A license or are replaced by new provisions. INAC further recommends that the Type A licence clearly indicate where provisions apply to only one aspect of the project or all aspects of the project.

INAC commended AEM for their cooperation, professionalism, and integrity during the course of the water licensing process, and expressed confidence that AEM will operate the Project in a fashion that will ensure the protection of freshwater resources and provide meaningful and rewarding socioeconomic opportunities for Nunavutmiut.

### **Environment Canada**

The primary relevant legislation and standards that EC administers or adheres to are section 36 of the *Fisheries Act*, the *Metal Mining Effluent Regulations* (MMER), the *Canadian Environmental Protection Act*, and two sets of Canada-wide standards for mercury emissions and for dioxins and furans.

EC made submissions on water quality issues, including lake dewatering, the aquatic monitoring programs, setting effluent quality criteria, AEM's water quality prediction, water quality in the pit lakes, groundwater monitoring, and on waste rock and tailings management.

EC submitted that it supports AEM's dike construction and dewatering management plan to dewater the natural lakes to make room for their attenuation ponds and to manage water. EC recommends the submission of a simple dewatering plan stating what AEM will do, when, and the applicable thresholds as a condition of the water license.

EC recommends that a consolidated Aquatic Effects Management Plan (AEMP) be submitted to harmonize the various water monitoring requirements for the Project, including SNP monitoring compliance monitoring, aquatic effects monitoring for discharges into the receiving environment, environmental effects monitoring (EEM)

pursuant to the MMER, groundwater monitoring, and DFO Fisheries authorization monitoring. Separate from the EEM, the AEMP should require annual reporting for more immediate adaptive management, mechanisms to measure changes to productivity in the lake as a result of the mine adding nutrients, and construction phase sampling for the construction of dikes and dewatering.

Regarding site water quality monitoring, EC submitted that diffuser discharge stations CM-4 and CM-5 should include a broader suite of analyses in order to characterize the effluents in advance of discharge, and the tailings storage facilities, CM-8 parameters should include analysis for nitrogen compounds. EC further submitted that the waste rock pile monitoring should include total metals at least annually to facilitate comparisons to guidelines.

EC recommends changes to effluent quality criteria, including regulation of turbidity, lowering of proposed chloride levels, and a management plan for surface runoff total suspended solids. EC further submitted there is still some uncertainty regarding the modeling of nitrogen compounds from the cyanide breakdown and regarding the levels of ammonia which will accumulate in the attenuation pond and reclaim pond. Accordingly, EC recommends an approved ammonia management plan as a licensing condition.

EC also recommends a stand-alone groundwater monitoring plan, including the early installation of robust, permanent monitoring wells

EC submitted that tailings and waste rock issues, and the management of these solid wastes from the mine are critical for the long-term impact of the development. EC's submission addressed several issues, including the need to segregate mine rock to ensure it is properly disposed of; effectiveness of the cover to isolate the active zone from the reactive material and the actual segregation of material to ensure that problematic rock is not in that cover; the fact that in the course of evaluation rock may be found either to be substantially more problematic to deal with or that the cover design requires significant modification; and the need to characterize till rock which may generate acid rock drainage. EC recommends a rock segregation system that is routinely audited to confirm the rules that are used for segregating rock are working, and a contingency plan to ensure that the site is decommissioned safely.

Regarding incineration, EC commended AEM for the cooperative approach to implementing the best technology for incineration. EC recommends an incineration management plan as a license condition, including best practices for ash disposal. EC further submitted it is satisfied with the proposed land farm, and hazardous materials management and spill contingency planning, provided AEM meets the commitments made.

EC submitted that closure planning should include the appropriate mitigation measures identified and implemented prior to breaching of the dikes and that these are to be detailed in the plan submitted to the NWB prior to closure. Details on any treatment facility required for treatment of reclaimed pond water should also be included in future

updates to the closure and reclamation plan. EC recommends that AEM's commitment to prepare and submit a detailed monitoring and instrumentation plan once a final waste rock deposition plan has been developed in respect of progressive closure be incorporated as condition of the licence.

In closing, EC expressed appreciation for AEM's interactive and cooperative approach which helped to resolve many of EC's concerns.

### **Department of Fisheries and Oceans Canada**

The DFO participated in the review of the Project pursuant to its responsibility for the sea coast and inland fisheries pursuant to the *Constitution Act*, including the conservation and protection of fish and marine mammals and their habitat pursuant to the *Fisheries Act*.

DFO advised the Board that the northwest arm of Second Portage Lake is a fish-bearing water body, thus an amendment to add the water body to Schedule 2 of the MMER must be approved by the Governor-in-Council prior to tailings deposition. DFO further advised the Board that the Governor-in-Council has approved the proposal for this listing on the Canada Gazette I, public comments were received and are now being considered.

DFO further advised the Board that pursuant to the MMER and section 35(2) of the *Fisheries Act*, DFO will require AEM to provide financial security in the form of irrevocable letters of credit specifically for the completion and monitoring of the fish habitat compensation features within Second and Third Portage Lakes prior to the issuance of a *Fisheries Act* subsection 35(2) authorization. DFO is currently working with AEM on these cost estimates.

DFO submitted that AEM's no-net-loss plan includes several fish habitat features to offset the loss of fish habitat from mine construction and the tailings impoundment area. DFO further submitted that the installation of two culverts during construction of the Vault Lake access road may improve channel access for the existing fish population and AEM has committed to providing the final detailed design and construction drawings to the NWB and DFO for review prior to commencing road construction.

DFO recommends that the final detailed design and success criteria for the East, Tails, Goose Island, and Bayzone dike faces be provided in the consolidated no-net-loss plan for review and approval at least six months prior to planned construction, and as-built drawings of the fish habitat features be provided to indicate how the features have changed through actual implementation. DFO also recommends that AEM consult with DFO regarding the success criteria for the fish habitat features prior to finalizing the monitoring programs. DFO further recommends that the addendums to the no-net-loss plan be consolidated into one final no-net-loss plan document.

DFO submitted that AEM has substantially fulfilled the request for clarification of the dewatering pipe for review and approval. DFO recommends that AEM also provide the detailed design drawings and plans of the intake pipe and fish screen for the intake of

water from a small unnamed lake for use in the emulsion plan for DFO review and approval.

DFO submitted that the preliminary assessment of the potential effects of pit flooding on Third Portage and Wally Lakes indicates that the impacts to fish and fish habitat can be mitigated. DFO recommends that as updated information on the re-flooding plan is developed, it should be submitted to the NWB and DFO for review and approval prior to implementation. DFO also recommends that the water license ensure that pit flooding is conducted so that the water flow is maintained at downstream locations and at outlet streams.

With regard to the tailings impoundment area, DFO defers to EC's recommendations for water quality objectives and legal requirements under the MMER.

DFO submitted that it is of the opinion that AEM has substantially completed the fish-out proposal for the northwest arm of Second Portage Lake. DFO advised the Board that AEM has committed to providing the final fish-out program, incorporating community consultation and scheduling of the fish-out programs in the other basins to DFO.

With regard to contingency planning, DFO submitted that the majority of the fish habitat compensation features rely heavily on water quality of the basins at mine closure. In the event that water quality within the pit lakes does not meet CCME, aquatic life guidelines, background lake concentrations, or other risk-based assessment criteria and the dikes cannot be breached, an adaptive management plan with contingencies for alternative fish habitat compensation features is required. A contingency plan would also be required in the event targeted studies reveal that the habitat structures are not functioning as intended. DFO recommends that contingency plans detailing alternative fish habitat features to offset the loss of habitat from mine construction be developed in consultation with communities and DFO and be submitted to the NWB for review and approval.

DFO concluded that it is anticipated that the mitigation measures and recommendations will adequately address the identified concerns, and DFO expects that the final no-net-loss plan will adequately address residual impacts to fish and fish habitat.

### **Government of Nunavut – Department of the Environment**

The GN-DOE reviewed the application under its authority to control the discharge of contaminants and their impact on the environment under the *Environmental Protection Act* and its authority under the *Wildlife Act*. GN-DOE's recommendations relate to six topics: water management and water quality; waste management; geochemistry; contingency planning; monitoring; and closure and reclamation.

GN DOE submitted that it agrees with AEM's proposal that water quality will comply with the MMER at the diffuser discharge points, and meet either the CCME within a 30-metre radius of the two diffusers or site-specific criteria acceptable to EC. GN-DOE further submitted that AEM agrees with the GN-DOE's recommendation to refine water

quality predictions and management plans based on monitoring data during operation and recommends this as a term of the licence.

GN-DOE also recommends that AEM restore Tear Drop Lake, which is to be used for the discharge of treated sewage that will meet the guidelines for the discharge of treated municipal waste water in the Northwest Territories, to appropriate standards upon closure, and this recommendation form a term of the license.

With regard to landfills and the landfarm, GN-DOE submitted that to date, AEM has submitted final design drawings stamped by a professional engineer for landfill number 1 and the landfarm and has committed to provide construction drawings for review prior to construction. GN-DOE recommends that for landfill number 2, which is to be built upon a structure built during mine operation, AEM be required as a term of the licence to submit the proposed final design drawing prior to commissioning of the landfill and that the construction drawing for landfill number 2 also be submitted prior to construction. GN-DOE further recommends that AEM be required to submit as-built drawings for both landfills and the landfarm as a term of the licence.

With regard to waste handling, GN-DOE recommends that AEM's commitment to handle and segregate waste asbestos, white goods such as refrigerators and light bulbs, and fluorescent lamp tubes, in accordance with relevant Federal and Territorial guidelines form a term of the licence. GN-DOE also submitted that it is satisfied with AEM's commitment to comply with both the CCME Canada-wide standards and the relevant GN-DOE guidelines for remediation of hydrocarbon-contaminated soil and to measure appropriate parameters during the remediation process, and recommends these commitments be incorporated into the licence.

GN-DOE submitted that AEM responded to a concern about insufficient testing for ARD and metal leaching potential for materials along the All Weather Private Access Road such as the material at the quarry site by committing to surveying rock quality and drainage chemistry at each quarry site over the summer of 2008 in order to finalize quarry closure plans. GN-DOE recommends this commitment form a term of the licence. Further, GN-DOE recommends AEM's commitment to continue to conduct total metal analysis and shake flask extraction tests and operate humidity cells and large fuel cells to better understand metal leaching potential and leaching rate for both non potentially acid generating and potentially acid generating packed materials form a term of the license.

GN-DOE submitted it is satisfied with the spill contingency plan submitted by AEM. GN-DOE recommends that a requirement to update the spill contingency plan annually be incorporated into the licence. GN-DOE also requests that AEM's commitment to develop a detailed contingency plan to temporarily store contaminated soil at the tank farm burn area or construct a second landfarm to accommodate the spill materials in the event of a large spill that the landfarm cannot be accommodated be incorporated into the licence.



GN-DOE submitted it is satisfied with AEM's commitment to conduct thermal monitoring of the tailings storage facility until it does not present an environmental risk; however, GN-DOE recommends that the results of thermal monitoring be reported annually and that the commitment to monitor, and the requirements, form a term of the licence. GN-DOE also recommends licence conditions for thermal monitoring of the two rock storage facilities to verify physical and chemical stability, and to employ mitigative measures if monitoring indicates that chemical and physical stability are not present.

GN-DOE's supports AEM's proposal to meet CCME guidelines or site-specific criteria within pit lakes prior to dike breaching provided site-specific criteria are approved by EC. GN-DOE recommends this form a term of the licence.

GN-DOE submitted that the closures assessed for the tailing storage facility and rock storage facilities are based on the assumptions such as correct rock characterization and establishment of frozen conditions within the cores of these facilities. GN-DOE recommends that AEM revise closure plans for these facilities as the operational information and management plans are revised and this form a term of the licence.

Regarding revegetation and reclamation, GN-DOE submitted that AEM has committed to monitor the condition at the reclaimed Meadowbank site, including the success of revegetation measures until the landowner and the NWB are satisfied that the site is chemically and physically stable and that the ongoing risk of release of contaminants to the surrounding environment has been adequately addressed. GN-DOE is satisfied with AEM's commitment and recommends these form a term of the licence if issued.

In summary, GN-DOE advised the Board that the Application describes measures to mitigate and manage potential impacts resulting from the Project, and subject to the recommendations, generally provides satisfactory mitigation and management procedures for all waste streams and hazardous materials.

On behalf of the Government of Nunavut, Community Government Services (GN-CGS), GN-DOE advised the Board that GN-CGS will be seeking financial security for the components of the Baker Lake Marshalling Facility located on Commissioner's land. GN-CGS will know better which component of the project to include in its liability assessment once AEM has provided the necessary details concerning the location of the marshalling area, and GN-CGS will discuss the options of security bonding with the company once the GN has concluded its assessment.

## **JURISDICTION OF THE BOARD**

This Board has jurisdiction over AEM's application pursuant to Division 2 of the NWNSRTA.<sup>28</sup> Relevant sections in that Division allow the Board to issue a licence.<sup>29</sup> In deciding to issue a licence or engage in any other statutory function, the Board must follow the objects of the governing legislation, which are:

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<sup>28</sup> See sections 42-81 of the NWNSRTA.

<sup>29</sup> See sections 42, 48, 55, 56, and 70 of the NWNSRTA.

... to provide for the conservation and utilization of waters in Nunavut, except in a national park, in a manner that will provide the optimum benefit from those waters for the residents of Nunavut in particular and Canadians in general.<sup>30</sup>

In setting the terms and conditions of this licence, the Board is guided by these objects and by the NIRB Project Certificate that covers these same matters. The Board intends to meet its statutory duty to make *all* reasonable efforts to minimize *any* adverse effects on aquatic ecosystems. Reading the several Articles of the NLCA together, which the Board is entitled to do to understand its jurisdiction,<sup>31</sup> the Board relies on the broad definition of “ecosystemic” found in Article 12.1.1 of the NLCA to require not only NIRB but also the NWB to ensure all components of the ecosystem such as fish and fish habitat are protected within the parameters of section 71 of the *Act*.

For all matters relating to its licence application, the burden of proof in this Hearing rests with the Applicant. The NWB Rules of Practice state: “In cases in which the Board accepts evidence, any party offering such evidence shall have the burden of introducing appropriate evidence to support its position. Where there is conflicting evidence, the Board will decide which evidence to accept and will generally act on a balancing of the evidence”.<sup>32</sup> Where a party presents no evidence supporting or rejecting the applicant’s evidence, the NWB will base its decision on its own assessment of the Applicant’s request.

## **REQUIREMENTS OF THE NWNSRTA**

### **Objects of the Board and its Relationship to other Bodies**

#### **Land Use Plans**

The Project area currently lies within the Keewatin Land Use Planning Region where there is an approved Land Use Plan in place. Pursuant to subsection 36(2) of the NWNSRTA, the Board has been advised by the NPC that the Project conforms with the Keewatin Regional Land Use Plan.<sup>33</sup>

#### **Relationship to Environmental Assessment**

For the purpose of AEM’s Application, two Articles of the NLCA are relevant and binding: Article 12 (Impact Assessment) and Article 13 (Water Management). Where possible the two Articles must be read together and interpreted as one.

As discussed previously, a full environmental impact review pursuant to Article 12 of the NLCA was completed and NIRB issued Project Certificate No.: 004 for the Meadowbank Gold Mine Project Proposal on December 30, 2006.

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<sup>30</sup> Section 35 of the NWNSRTA.

<sup>31</sup> See Article 2 and section 2.9.1 of the NLCA.

<sup>32</sup> Nunavut Water Board *Rules of Practice and Procedure for Public Hearing*, section 8.13.

<sup>33</sup> Email from Brian Aglukark, NPC, to Phyllis Beaulieu, NWB, dated July 18, 2003.

The NIRB Project Certificate has several conditions relating directly, or by implication to the water licence, including conditions related to regulatory requirements,<sup>34</sup> monitoring,<sup>35</sup> water quality and waste management,<sup>36</sup> all-weather access road,<sup>37</sup> fish and fish habitat,<sup>38</sup> accidents and malfunctions,<sup>39</sup> and abandonment and reclamation.<sup>40</sup> The NWB confirms that the licence meets the requirements of the Project Certificate as it relates to the jurisdiction of the NWB.

### **Article 20 of the NLCA**

Separate from the IIBA, KIA and AEM addressed the impacts of the project on Inuit water rights pursuant to Article 20 of the NLCA and section 63 of the NWNSRTA. KIA confirmed that it has entered into a water compensation agreement with AEM and KIA is satisfied that compensation concerns related to Inuit water rights are resolved.<sup>41</sup>

### **Recommendations on Marine Areas**

Section 41 of the NWNSRTA permits the Board to advise and make recommendations respecting any marine matters that may arise to any department or agency of the Government of Canada or the Government of Nunavut.<sup>42</sup> The Board has no recommendations on marine areas for this Application.

In response to a number of questions from community members regarding marine shipping and the potential for spills, the NWB notes that Condition 39 of the NIRB Project Certificate requires AEM to annually advertise and hold a community information meeting in Chesterfield Inlet to report on the Project and to hear from Chesterfield Inlet residents and respond to concerns.<sup>43</sup>

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<sup>34</sup> NIRB Project Certificate No. 4 – Regulatory requirements Nos. 4-5, 30.

<sup>35</sup> NIRB Project Certificate No. 4 – Monitoring requirements Nos. 6-7, & 22-23...

<sup>36</sup> NIRB Project Certificate No. 4 – Water Quality and Waste Management requirements Nos. 8-20, 24-27.

<sup>37</sup> NIRB Project Certificate No. 4 – All-weather access road requirements Nos. 31-32, & 35.

<sup>38</sup> NIRB Project Certificate No. 4 – Fish and Fish Habitat requirements No. 47

<sup>39</sup> NIRB Project Certificate No. 4 – Accident and malfunction requirements Nos. 75-77.

<sup>40</sup> NIRB Project Certificate No. 4 – Abandonment and Reclamation requirements Nos. 78-80.

<sup>41</sup> Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 16, 2008, at p. 330.

<sup>42</sup> Section 41 of the NWNSRTA states:

The Board may, either jointly with the Nunavut Planning Commission, the Nunavut Impact Review Board and the Nunavut Wildlife Management Board, as established by the Agreement, acting as the Nunavut Marine Council referred to in section 15.4.1 of the Agreement, or on its own, advise and make recommendations respecting any marine area to any department or agency of the Government of Canada or the Government of Nunavut, and those governments shall consider that advice and those recommendations when making any decision that may affect that marine area.

<sup>43</sup> Ms. Putulik, a resident of Chesterfield Inlet asked a series of questions:

Thank you. Brenda Putulik from Chesterfield. Question: What plans are in place for any contaminants or if there were to be any spills in the marine or in the oceans within Chesterfield Inlet? I didn't see any indications in regards to that. Is there any emergency response to that? Quyanamiik.

...The next question I would like to know is approximately how long would it take to come to the site to assess the damage and to clean, example, the spill on the barge with the fuel or any other toxics? Quyanamiik.

## **DECISION TO ISSUE**

Following the public hearing and for reasons elaborated further below, the Board has decided to issue Water Licence 2AM-MEA0815 (Licence) subject to the conditions set out therein.<sup>44</sup> The Licence contains terms and conditions the Board feels are necessary to protect the environment, conserve the water resources and provide appropriate safeguards in respect of the Licensee's use of waters and deposit of wastes. The Licence also parallels the recommendations and suggestions made by the NIRB in the Environment Assessment Report approved by the Minister.<sup>45</sup>

### **Issuance of a Licence**

As stated above and pursuant to subsection 42(1) of the NWNSRTA, the Board has decided to issue the Licence subject to the terms and conditions set out therein and explanation herein. In issuing the Licence, the Board is satisfied that the application contains the required information based on the NWB Guidelines and is in the proper form having regard to the NWNSRTA and associated regulations.<sup>46</sup>

### **Assumptions**

Where there was doubt in the Board's mind about a certain parameter or standard, the Board has imposed stringent monitoring conditions to ensure the company will be meeting its promises of performance made in its written application and at the Baker Lake Final Hearing. Based on the Board's assumption that AEM intends to meet its commitments, the commitments filed by AEM at the Public Hearing have, where appropriate, been incorporated into the Licence.<sup>47</sup>

### **Applications in Relation to Licenses**

Overall, the Board is satisfied that the requirements of section 48 of the NWNSRTA have been met. AEM filed an application which complied with the Board's rules, including the application fee as required.<sup>48</sup> The Applicant also provided the necessary information to

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... In cleaning up the fuel or any toxins, is there any materials, example, oil pads, these kinds of materials needed to clean up or assess the damage, or pretty much what I'm saying is will there be any materials in place, in hand, in case this does happen? Quyannamiik.

Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 16, 2008, at pp. 290-292.

<sup>44</sup> The Licence has been issued under separate cover.

<sup>45</sup> NIRB Environmental Assessment Report issued to the INAC Minister on August 30, 2006, and accepted by then Minister Prentice on November 17, 2006.

<sup>46</sup> *Northwest Territories Water Regulations*, S.O.R./93-303 [hereinafter Regulations] and Application of Regulations made under paragraph 33(1)(m) or (n) of the *Northwest Territories Waters Act* in Nunavut Order, S.O.R./2002-253.

<sup>47</sup> Exhibit 18: Hard Copy – AEM Type A Water Licence Commitments, filed by Larry Connell.

<sup>48</sup> In accordance with section 48(1) of the Regulations a fee of \$30 was provided with the Initial Application. Letter from Richard Dwyer, NWB, to Louise Grondin, AEM, Re: Acknowledgement and Receipt of Application Fee - New Water License Application – Meadowbank Project, dated October 2, 2007.

evaluate the qualitative and quantitative effect of the use of water or the deposit of waste into water.

### **Application to Amend or Application for future Modifications**

In relation to future applications to amend or modify the Project, the Board reminds AEM that it must comply with all requirements of the NLCA.

### **Assignment of a Licence**

The Board reminds AEM that any sale or other disposition of any right, title or interest in an appurtenant undertaking must comply with the licence assignment requirements set out in section 44 of the NWNSRTA<sup>49</sup>

### **Term of Licence**

In accordance with section 45 of the NWNSRTA, the term of a licence or any renewal may be as long as twenty-five years.

The Application before the Board is for a relatively short seven-year licence. AEM submitted that based on the known reserves the mine has a life of 12 years, two years of construction and 10 years of operation. A seven-year licence will require a renewal application approximately halfway through the mine's operating life, giving all interested parties an opportunity to review the monitoring, adaptive management and progressive reclamation progress made during the first half of the mine life. The Board notes there were no issues raised by the parties with regard to the proposed term of the Licence. With the need for a balance between certainty for the Applicant and accountability for interested parties in mind, the Board has decided on a seven-year term for the licence.

The Board also accepts AEM's request, with support for the amalgamation from INAC,<sup>50</sup> to incorporate two existing Type B licences, 8BC-MEA0709 for the Baker Lake Marshalling Facility and 8BC-TEH0809 for the All Weather Private Access Road, into the Licence.<sup>51</sup> This allows for all of the mine facilities to be administered and monitored under one licence. The terms and conditions approved by the Board in separate decisions for the Type B licences have been incorporated into this Type A Licence. The Board notes that section 46 of the NWNSRTA states "[T]he expiry or cancellation of a licence does not relieve the holder from any obligations imposed by the licence." To the extent that any residual obligations from the Type B licences conflict with the conditions of this Type A Licence, as approved by the Minister pursuant to section 56 of the Act, the Board directs that the conditions of this Type A Licence prevail.

## **WATER LICENCE 2AM-MEA0815 TERMS AND CONDITIONS**

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<sup>49</sup> Assignment forms may be obtained from <http://nunavutwaterboard.org/ftp/administration>.

<sup>50</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 15, 2008, at p. 129.

<sup>51</sup> Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 15, 2008, at pp. 33-34.

This Licence does not take effect until approval of the Minister is given pursuant to section 56 of the NWNSRTA.<sup>52</sup>

## **PART A: SCOPE, DEFINITIONS AND ENFORCEMENT**

### **Enforcement and Compliance**

For the purpose of ensuring compliance with the Licence, an Inspector designated by the Minister may inspect or examine works, waters or waste and exercise other powers according to the NWNSRTA.<sup>53</sup> The NWNSRTA includes serious penalties for breach of the Licence, including furnishing or maintaining security.<sup>54</sup> Investigation or inspections are carried out by persons designated by the Minister.<sup>55</sup>

### **Metal Mining Effluent Regulations**

The Licence states that “Compliance with the terms and conditions of this Licence does not absolve the Licensee from responsibility for compliance with all applicable legislation, guidelines and directives.”<sup>56</sup> The Board was advised by DFO that the MMER applies to the Project.<sup>57</sup>

Thus, the following key points must be respected: (1) the Tailings Impoundment Area cannot be used until the northwest arm of Second Portage Lake is listed on Schedule 2 of the MMER; and (2) while the Licence is issued immediately, it does not authorize habitat alteration disruption or destruction pursuant to section 35 of the *Fisheries Act*, nor does it authorize the deposit of deleterious substances into fish-frequented waters pursuant to section 36 of the *Fisheries Act*. Accordingly, this Licence is not intended nor is to be used as evidence to remove or usurp the Governor-in-Councils’ discretion with regard to MMER approval for the northwest arm of Second Portage Lake.

## **PART B: GENERAL CONDITIONS**

### **Water Use Fees**

The Licensee is required under the Regulations to provide a fee for the right to the use of water. This fee must be calculated on an annual basis in accordance with subsection 9(1)(b) of the *Northwest Territories Water Regulations* (Regulations). As no “deposit” for the water use fee was provided by the Applicant, the water use fee shall be paid in accordance with subsection 9(6)(b) of the Regulations, including for the first year of the

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<sup>52</sup> Subsection 56(1) of the NWNSRTA states:

56(1) the issuance, amendment, renewal and cancellation of a Type A license and if a public hearing is held a Type A licence are subject to the approval of the Minister. The license is considered approved ninety days following issuance of the licence or as otherwise approved by the minister under section 56 of the *Act*.

<sup>53</sup> See sections 85-94 of the NWNSRTA

<sup>54</sup> See section 90 of the NWNSRTA.

<sup>55</sup> See sections 85-88 of the NWNSRTA.

<sup>56</sup> Licence Part A, Item 3.

<sup>57</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 16, 2008, at pp. 278-279.

Licence, at the time the Licence is approved by the Minister. For each subsequent year of the Licence the water use fee shall be paid in advance, on the anniversary of the date the License was issued. Payments shall be made to the Manager of Licensing with a cheque payable to the Receiver General for Canada. The Board encourages AEM to consult with the NWB staff for confirmation on calculation of water use fees.

### **Reports filed with the NWB**

With the exception of the Annual Report all other plan(s) or report(s) (Plan, or collectively Plans) submitted to the Board under this Licence shall include a proposed timetable for implementation. Unless listed as approved in the Licence, a Plan cannot be undertaken without subsequent written Board approval. The Board may alter or modify a Plan if necessary to achieve the legislative objectives and will notify the Applicant in writing of acceptance, rejection, or alteration of the Plan. The Plan must then be carried out in a manner and timeframe consistent with the Board's direction.

Every Plan to be carried out pursuant to the terms and conditions of this Licence shall become a part of this licence, and any additional terms and condition imposed upon approval of a Plan by the Board become part of this Licence. All terms and conditions of the Licence should be contemplated in the development of a Plan where appropriate.

The Application contains several plans and engineered designs that were reviewed by the Board. The Board has approved these as presented unless otherwise indicated in the terms and conditions of the Licence.<sup>58</sup>

## **PART C: CONDITIONS APPLYING TO SECURITY**

### **Financial Responsibility of the Applicant and Requirement of Security**

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<sup>58</sup>Specifically the Plans approved by the Board include:

1. Mine Waste and Water Management Plan
2. Emergency Response Plan
3. Landfill Design and Management Plan
4. Hazardous Materials Management Plan
5. Vault Testing and Monitoring Plan
6. Spill Contingency Plan
7. Water Quality and Flow Monitoring Plan
8. Aquatic Effects Management Program Plan

Specifically the Plans that require Board approval include:

9. Incineration Management Plan
10. Landfarm Management Plan
11. Operational ARD/ML Sampling Plan
12. Groundwater Monitoring and Management Plan
13. Interim Abandonment and Reclamation Plan
14. Final Abandonment and Reclamation Plan
15. Water Quality Monitoring and Management plan for Dike Construction and Dewatering

Detailed Design and Construction Drawings that require Board approval include:

1. Saddle Dam
2. Goose Island Dike
3. Vault Dike

The NWNSRTA allows the Board to require a licensee to furnish and maintain security with the Minister in a form determined by the regulations or satisfactory to the Minister.<sup>59</sup> Further, in a matter related to the posting of security, the Board may not issue a licence unless the Board is satisfied that the financial responsibility of the applicant, taking into account the applicant's past performance, is adequate for the mitigation measures and any costs associated with the closing or abandonment of the undertaking.<sup>60</sup>

### **The Board's Jurisdiction over Land and Water Security**

In the Board's recent *Reasons for Decision for the Doris North Gold Mine*,<sup>61</sup> the Board fully canvassed the issue of the Board's jurisdiction over land and water related security, and concluded that the Board has jurisdiction to determine the total land and water related amount of security:

After careful consideration, the Board accepts the submissions of both [Kitikmeot Inuit Association] and MHL on the matter of the Board's jurisdiction pursuant to section 76(1) of the NWNSRTA. In particular, in the Board's mind, the language of subsections 76(1) and 70(1)(d), as well as the wording of the section 12 of the NWT Water Regulations, including the use of the words "appurtenant undertaking" provide the Board with jurisdiction to determine the total amount of security – water and land-related - for the Project. Furthermore, while the Board is not bound by its previous decisions, the Board has reviewed and re-affirms its reasons in its 2001 Boston Renewal Decision, particularly those reasons cited above by MHL. Most importantly, the Board agrees with MHL that this decision is consistent with the Federal Court's interpretation of section 76(1) of the NWNSRTA in the Canzinc decision.<sup>62</sup>

Without argument on the issue of the Board's jurisdiction pursuant to section 76(1) of the NWNSRTA, INAC recommended to the Board that AEM be required to provide reclamation security for water-related reclamation costs only. INAC submitted this allows other parties, such as KIA, to negotiate separate reclamation security outside of the water licensing process and limits the risk of overburdening AEM with excessive security costs.

KIA accepted the Board has jurisdiction to address security for both land and water which may be affected by the Project.<sup>63</sup> With regard to how the security is held, KIA

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<sup>59</sup> Subsection 76(1) of the NWNSRTA states:

76(1) The Board may require an applicant, a licensee or a prospective assignee to furnish and maintain security with the Minister in the form, of the nature, subject to such terms and conditions as in an amount prescribed by, or determined in accordance with, the regulations or that is satisfactory to the Minister.

<sup>60</sup> See subsection 57(b) of the NWNSRTA.

<sup>61</sup> The Board's *Reasons for Decision for 2AM-DOH0713* may be found on the Nunavut Water Board FTP site at [http://www.nunavutwaterboard.org/en/public\\_registry](http://www.nunavutwaterboard.org/en/public_registry).

<sup>62</sup> Nunavut Water Board, *Reasons for Decision for 2AM-DOH0713*, September 19, 2007, at p. 25.

<sup>63</sup> See Meadowbank Gold Project Final Intervenor Comments, Nunavut Tunngavik Inc. and Kivalliq Inuit Association, March 31, 2008, at p. 3. [Hereinafter "NTI/KIA Written Submission"].



submitted to the Board that they proposed to INAC that the security be held in a trust;<sup>64</sup> however, INAC advised KIA that a trust for holding security for this project is not possible at this time due to the time it would take to prepare this.<sup>65</sup> KIA submitted, and the Board agrees, that the NWB does not have the express regulatory authority to require a trust, and absent agreement by the Minister that a trust is satisfactory, the Board is unable to require that the security be held in trust.<sup>66</sup>

KIA further submitted that should security for land and water be ordered and held only by the Minister, there are two other alternatives that are acceptable to KIA: reaching an agreement with Canada setting out how security held by the Minister will be applied to provide KIA with assurances that the security will be used to protect IOL; or INAC agrees to indemnify KIA against any liabilities for the abandonment and reclamation of the project.<sup>67</sup> KIA submitted that INAC has not agreed to either of these options.<sup>68</sup>

Absent an agreement with Canada, KIA submitted it is “forced to request its own additional security under its lease agreements”.<sup>69</sup> As a result, KIA informed the Board that it intends to require security in the amount of \$14.79 million, the amount KIA estimates as the land related security required to the end of the mine life.<sup>70</sup> KIA acknowledged that this may create a “double bonding requirement” for AEM, unless the Board requires the Minister to hold only water related security, estimated by KIA as \$29.08 million.<sup>71</sup> Even then, KIA acknowledged that the risk remains that any security

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<sup>64</sup> Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 16, 2008, at p. 334:

The first scenario that we came up with to address security: KIA initially proposed that security be held in a trust which would set out the rights and responsibilities of each party. This trust indenture would detail decision-making processes and other fundamental terms governing the application of security should it be needed. Rather than trying to allocate the security as between land and water in the absence of a real-life situation, where the facts would inform the partners as to how the security would be best applied, the parties would determine how to use the security based on the facts as they were known when and if the security is called upon. If INAC and KIA were to agree to the terms of the trust, satisfactory evidence could be provided to the Nunavut Water Board that adequate security is in place pursuant to the trust, thus, eliminating the need of the Nunavut Water Board to order security and avoiding the problems already mentioned.

<sup>65</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 16, 2008, at p. 335.

<sup>66</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 16, 2008, at p. 335.

<sup>67</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 16, 2008, at pp. 335-336.

<sup>68</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 16, 2008, at p. 337.

<sup>69</sup> Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 16, 2008, at p. 336.

<sup>70</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 16, 2008, at p. 337.

<sup>71</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 16, 2008, at p. 337.

held by the Minister for water may not be applied to Inuit Owned Land related reclamation.<sup>72</sup>

INAC submitted to the Board that the Minister cannot hold security jointly with another party within the framework of the NWB regime; however, some options do exist:

INAC is willing to discuss with landowners in Nunavut, such as associations in the KIA, approaches to the management of reclamation security that could fall outside of the Nunavut Water Board regime. We undertook such discussions with the KIA but were not able to develop a proposal in time for these hearings that we felt would be sufficiently detailed to give the Water Board confidence that the matter of security was being dealt with outside of the project's water license.

... with regards to...involving an agreement on the use of a land and water security held by the Minister; just to clarify, INAC supports the development of such an agreement, but despite best efforts, the KIA and INAC were not able to reach consensus on what the terms of such an agreement might be. We have never advised that such an agreement would be impossible.<sup>73</sup>

AEM did not provide the Board with an estimated split between land and water related security. The Board strongly agrees with AEM's reasoning that reclamation must be approached holistically:

...in our opinion, reclamation can't be broken up. It has to be done as a cohesive one job. You can't just differentiate an activity that affects water versus land. If you do, it's subjective. Reclamation has to be done as a holistic approach.<sup>74</sup>

Understandably, AEM objects to being put in a position of having to “double bond” for the security because KIA, as the landowner, and INAC cannot agree on a mechanism for jointly administering security:

This is an issue we recognize the Water Board has already spoken to, and we recognize that you have indicated in the past that you agree that land and water can't be split, that they're interrelated. In trying to isolate water from land, we end up, if we were to work that way in actually doing reclamation, our reclamation would be very inefficient. For example, I would have one group coming in to do one activity, and they have to bring all their equipment to the site, and then another group coming in to do another activity because they're doing only land and I'm only doing water, it would not be an efficient way of moving forward, and

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<sup>72</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 16, 2008, at p. 337.

<sup>73</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 16, 2008, at pp. 339-340.

<sup>74</sup> Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 15, 2008, at p. 41.

it would result in much higher costs. You'd have double management, double administration.

On a very large scale, that double bonding could add tens of millions of dollars to a reclamation bonding requirement, which would make development of mining projects on Inuit-owned land at a disadvantage compared to Crown land where you don't have those two owners or two responsible parties. So it places a disadvantage, this double bonding, the ability for mines to actually move forward on Inuit-owned lands. It's also an issue that would be unfair to industry as it does result in us having to put more money into a bond at the front end than is actually needed to do reclamation.

...

No matter how you look at this, it's really an issue between INAC and the landowner. We recognize that the landowner has worked very diligently to try to find a solution to this. We know that. And perhaps the Board could encourage these parties to address and resolve this issue as part of their interventions. Perhaps the landowner could hold all of the security, or perhaps a 50/50 split is equitable, but the key point to Agnico is that we do not believe that we should be asked to put out more money than the cost of total reclamation as calculated by all parties.<sup>75</sup>

Again, the Board agrees with AEM. Absent evidence of an agreement between various holders of security, in this case INAC and KIA, on how total financial security for final reclamation will be held such that the total outstanding reclamation liability for land and water combined is secured, and will be executed such that land and water related reclamation will be approached holistically, the Board is not prepared to split land and water security.

What this Board can do is encourage INAC and KIA to continue to work diligently toward a solution, and remind AEM that Part C, Item 3 of the Licence permits AEM to request, with supporting evidence to justify the request, that the Board review the amount of the security requirement.

This is consistent with the Principles set out in INAC's *Mine Site Reclamation Policy for Nunavut*, 2002, which state:

- The total financial security for final reclamation required at any time during the life of the mine should be equal to the total outstanding reclamation liability for land and water combined (calculated at the beginning of the work year, to be sufficient to cover the highest liability over that time period).
- Estimates of reclamation costs, for the purposes of financial security, should be based on the cost of having the necessary reclamation work done by a third-party

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<sup>75</sup> Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 15, 2008, at pp. 43-44.

contractor if the operator defaults. The estimates should also include contingency factors appropriate to the particular work to be undertaken.

- The recognized methodology for calculating reclamation costs, for the purposes of financial security, should be the RECLAIM or some other appropriate model. Consideration should be given to alternate or innovative forms of security, such as mine reclamation trusts, provided they meet certain criteria that protect the government's interests and objectives.
- Financial security requirements related to reclamation should be clearly set out in water licences, land leases and other regulatory instruments, though there may be circumstances where security requirements may be more appropriately dealt with through an agreement.
- Mining operators should be credited for approved progressive reclamation, and the value of financial security required should be adjusted in a timely fashion.<sup>76</sup>

### **Amount of Security**

Agreement on the amount of reclamation security for the Project as a whole was not reached between INAC, KIA and the Proponent.

INAC, using its RECLAIM costing model, estimates the total reclamation security required to the end of the mine life is \$43.875 million.<sup>77</sup> INAC estimates the total reclamation security required at the end of Year 1 and Year 5 of the mine life to be \$16.218 million and \$26.105 million respectively.<sup>78</sup>

KIA, based on an estimate prepared by Geovector and comparison to INAC's estimate and AEM's estimate, estimates total end of mine life security at \$43.462 million.<sup>79</sup>

In the Application, AEM estimates the total reclamation security at the end of the mine life to be \$18 million.<sup>80</sup>

AEM attributes the difference in the estimates to AEM allowing for progressive reclamation over the life of the mine, and differences in the required depth of the capping rock over the potentially acid generating rock and tailings.<sup>81</sup> The latter difference is discussed in more detail in Part F below. However, AEM proposed to the Board that security be based on INAC's conservative assumptions and estimate for the proposed term of the licence:

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<sup>76</sup> *Mine Site Reclamation Policy for Nunavut*, 2002, at [http://www.ainc-inac.gc.ca/ps/nap/recpolnuna/index\\_e.html](http://www.ainc-inac.gc.ca/ps/nap/recpolnuna/index_e.html), as of June 5, 2008.

<sup>77</sup> See Department of Indian and Northern Development Written Intervention for the Nunavut Water Board Hearing on Type A Water License Application 2AM-MEA, March 2008, Table 1, at p. 5. [Hereinafter "INAC Written Submission"].

<sup>78</sup> See INAC Written Submission, Table 1, at p. 5.

<sup>79</sup> See KIA Written Submission, at p. 3 and Appendix A.

<sup>80</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 15, 2008, at p. 35.

<sup>81</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 15, 2008, at pp. 35-39.

...we've asked the Board to just focus the reclamation liability looking at the term of this first license, that being the seven-year term, look at what the liability will be during the seven-year term and to set the bond based on that. This means that we would post a reclamation security of 26.1 million. Where do we get that number? We actually took that from INAC's estimate.<sup>82</sup>

The Board notes that pursuant to the two Type B licences to be incorporated into the Licence, there are currently no security requirements for the All Weather Private Access Road or the Baker Lake Marshalling Facility. INAC advised the Board that it holds land-related security in the land leases for all portions of the All Weather Access Road located on Crown land.<sup>83</sup>

INAC submitted that their consultant estimated the total reclamation cost for the Baker Lake Marshalling Facility, a copy of which was apparently submitted to GN-CGS but not to this Board, is estimated at approximately \$500,000; comprised of land related costs of \$450,000 and \$45,000 for water and the proposed \$29 million proposed security would be sufficient to handle any water related issues.<sup>84</sup> GN-DOE, on behalf of GN-CGS, advised the Board that it will determine appropriate financial security for the component of the Baker Lake Marshalling Facility located on Commissioner's land.<sup>85</sup>

Given the Board's previously stated view on approaching land and water related security holistically and the objects of the Board pursuant to section 35 of the NWNSRTA,<sup>86</sup> particularly in these circumstances where a large amount of fuel is stored in closed proximity to Baker Lake which is the Hamlet's source of drinking water, the Board does not accept INAC's proposed approach to security at Baker Lake.

However, the Board accepts that given the decision to incorporate the two Type B licences into this Licence, the amount of security for the Project is such that it is sufficient to cover the cost of remediation of Baker Lake should there be an accident such as a fuel spill. The Board would be compelled to revisit this issue if the Marshalling Facility continued to be licensed as a stand-alone project.

AEM also proposed that the security increase over the term of the licence based on the increased disturbance level, starting at \$12 million upon issue of the Licence; \$15 million

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<sup>82</sup> Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 15, 2008, at p. 39.

<sup>83</sup> See INAC Written Submission, at p. 5.

<sup>84</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 15, 2008, at pp. 159-160.

<sup>85</sup> See INAC Written Submission, at p. 5.

<sup>86</sup> Section 35 states:

The objects of the Board are to provide for the conservation and utilization of waters in Nunavut, except in a national park, in a manner that will provide the optimum benefit from those waters for the residents of Nunavut in particular and Canadians in general.

at January 1, 2009; \$18 million at January 1, 2011; \$20 million at 2012; and the full proposed amount of \$26.1 million at January 1, 2013.<sup>87</sup>

AEM submitted that this proposal fully secures all reclamation liability before the disturbance takes place and all disturbances occurring during the term of the Licence are fully bonded.<sup>88</sup> AEM stated that this approach will provide all parties with better field data on site conditions and progressive reclamation to address future security at the end of the first term of the Licence.<sup>89</sup>

INAC agrees with the phased approach to security, stating for water related security only that:

...the total estimate for water-related security prepared by INAC for the entire post-project is 29.084 million. INAC is recommending an initial security payment of 7.625 million, followed by additional security up to 15.841 million up to the end of the first licensing period or the first five years of mine operations, whichever comes first.<sup>90</sup>

KIA submitted no objections to a phased approach for water related security; however, KIA informed the Board it intends to require full security for land related reclamation at the outset of the Project.<sup>91</sup>

The Board finds that in the absence of evidence to the contrary, a conservative approach to reclamation requirements is necessary when setting security. Accordingly, the Board accepts the estimates for security based on INAC and KIA's projection of non-potentially acid generating rock cover requirements until field data is collected and site specific evidence is available to support a lesser reclamation requirements. Similarly, the Board will consider AEM's record of progressive reclamation in determining security at the time of the Licence renewal.

The Board's conservative approach is further supported by the fact that subsection 76(2) of the NWNSRTA permits the Minister to access security for compensation pursuant to section 13 of the NWNSRTA, and to compensate Canada for certain costs that may have been incurred. It appears to the Board that the potential costs for compensation and Canada's costs that are not directly related to reclamation are not provided for separately in security estimates.

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<sup>87</sup> Exhibit 2, Hard Copy of the AEM Public Hearing Presentation, April 2008, Slide titled Meadowbank Type A Water License Application Part C: Conditions Applying to Security (slide not numbered).

<sup>88</sup> Exhibit 2, Hard Copy of the AEM Public Hearing Presentation, April 2008, Slide titled Meadowbank Type A Water License Application Part C: Conditions Applying to Security (slide not numbered).

<sup>89</sup> Exhibit 2, Hard Copy of the AEM Public Hearing Presentation, April 2008, Slide titled Meadowbank Type A Water License Application Part C: Conditions Applying to Security (slide not numbered).

<sup>90</sup> Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 16, 2008, at pp. 340-341.

<sup>91</sup> Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 16, 2008, at p. 342.

The Board further agrees with KIA's approach to seek full security for reclamation at the outset of the Project. This ensures that adequate security is available should Project development and the related disturbances be accelerated during the term of the Licence.

For these reasons and based on the evidence, pursuant to subsection 76(1) of the NWNSRTA and the Board's jurisdiction to determine the amount of security for the Project as a whole, the Board sets the total amount of security at \$43.9 million.

### **Phasing in of Security**

In the past, the Board has allowed for phasing in of security:

Recognizing the fact that security should always be commensurate with the actual costs to conduct A & R, which are ongoing, the Board does believe the security should be paid in installments so that the security expenditures can somewhat be synchronized with the operations of the mine. The Board asks DIAND to reach agreement with EBM on the installment schedule.<sup>92</sup>

In that case, the Lupin mine was entering into the latter years of operation, leading to closure. In this case, the mine is ramping up. As the Board does not control AEM's development schedule and the related disturbances, the Board requires security be held in the following total amounts: \$26 million within 30 days of the approval of the Licence; \$30 million as at January 1, 2010; \$34 million as at January 1, 2011; \$38 million as at January 1, 2012; \$42 million as at January 1, 2013; \$43.9 million as at January 1, 2014.

Again, the Board reminds AEM that Part C, Item 3 of the Licence permits AEM to request, with supporting evidence to justify the request, that the Board review the amount of the security requirement.

### **Form of Security**

Pursuant to section 76(1) of the NWNSRTA, the final determination with respect to the most appropriate form of security must be left to the Minister. The Board recommends to the Minister that the decision as to the form of the security be made in consultation with the AEM and KIA.

## **PART D: CONDITIONS APPLYING TO CONSTRUCTION**

The Board requires for review and approval, at least six months prior to construction, detailed design and construction drawings of the Saddle Dams, Goose Island Dike and Vault Dike accompanied by a detailed assessment report from an independent geotechnical expert review panel. The Board is aware that AEM is committed to establishing an independent geotechnical peer review panel consisting of a panel of geotechnical specialists, to independently review the design put forward for the dikes by

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<sup>92</sup> Nunavut Water Board File No. NWB1LUP0008, Decision dated June 30, 2000, at p. 31.

AEM's consultants.<sup>93</sup> The Board recommends that as a minimum the review standards meet the requirements of the *Canadian Dam Association Safety Guidelines*.

The Board also requires AEM to submit for review and approval, at least thirty days prior to construction, a Final Water Quality Monitoring and Management Plan for Dike Construction and Dewatering consistent with the monitoring requirements and water quality parameters set out in the Licence.

Upon completion of construction the Board further requires AEM to submit as-built drawings stamped and signed by a qualified professional and including documentation of field decisions that deviate from original plans within ninety days of the completion of each structure designed to contain, withhold, divert or retain waters.

During the community session a number of questions were asked by area residents about the fish-out program prior to the dewatering of the northwest arm of Second Portage Lake.<sup>94</sup> The Board understands that AEM, in conjunction with the Hunters and Trappers Organization, organized a community meeting scheduled for the following evening specifically to consult with the community members about the fish-out program.<sup>95</sup> The Board commends AEM for this. The Board also understands that DFO has the regulatory responsibility for the approval of the fish-out program pursuant to the *Fisheries Act*. The Board notes that DFO is of the opinion that AEM has substantially completed the fish-out proposal, and that AEM has committed to providing the final fish-out program incorporating community consultation and scheduling of the fish-out programs in the other basins to the DFO.<sup>96</sup>

Given the level of concern expressed by the community, the Board requests that DFO and AEM continue to work closely with the community to finalize the fish-out program and to ensure that the community is informed about the fish-out program as it is implemented. The Board also asks that AEM provide the Board with a copy of the final fish-out program as approved by DFO as a courtesy to the Board.

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<sup>93</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 15, 2008, at p. 77.

<sup>94</sup> Mr. Niviatsiaq asked:

My comment was related to the issue to the lake, where the lake -- one of the lakes is going to be dewatered, and it contains fish. There's a fish habitat in there. How are they going to handle that to remove the fish?

Mr. Tookoome stated:

The fish that will be transferred, I feel that they will be transported; some will die from being transported. It would be better if you do not bring the dead fish to the communities. And when you're dewatering the lake, I don't know how you will dispose of the dead fish. That's my concern.

Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 15, 2008, at pp. 193 and 196.

<sup>95</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 15, 2008, at p. 194.

<sup>96</sup> See Fisheries and Oceans Canada Intervention Comments Meadowbank Gold Mine Project, March 31, 2008, at p. 5. [Hereinafter "DFO Written Submission"].



Prior to the construction of the tailings storage facility, effluent will be directed from the sewage treatment plant to the storm water management pond, as will effluent from the fuel containment facilities. The storm water management pond will then be discharged to the northwest arm of Second Portage Lake. Recognizing that during operations there will not be any discharge to the receiving environment, the Board has not set regulated discharge requirements during operations. However, the Board requires that the storm water management pond discharges to the receiving environment during construction be within the sewage effluent discharge parameters (BOD, TSS, and Faecal Coliforms) and oil and grease, benzene, toluene, ethylbenzene, lead and aluminum, proposed by EC, and agreed to by AEM.<sup>97</sup>

## **PART E: CONDITIONS APPLYING TO WATER USE AND MANAGEMENT**

Section 11 of the NWNSRTA states “... no person shall use, or permit the use of, water in Nunavut except in accordance with the conditions of a licence.”

Subject to a requirement that AEM maximize to the greatest practical extent, the use of reclaim water from the tailings storage facility for use in the mill and to report to the Board annually the volume of reclaimed water obtained from the Tailings Storage Facility for process water, the Board approves the Applicant’s request to obtain fresh water from Third Portage Lake using a fresh water intake barge for domestic camp use, mining and milling and associated uses. The Board also approves the Applicant’s request to obtain fresh water for explosives mixing from a non-fish bearing, unnamed lake located approximately 250 metres from the Emulsion Plant to a maximum of 6.5 cubic metres per day. The total volume of water from both sources shall not to exceed 700,000 cubic meters per year.

The Board requires AEM to equip all water intake hoses with a screen of an appropriate mesh size to ensure that fish are not entrained and withdraw water at a rate such that fish do not become impinged on the screen. As recommended by DFO, the Board also requires AEM to provide the detailed design drawings and plans of the intake pipe and fish screen for the intake of water from a the unnamed lake for use in the emulsion plan to DFO for approval prior to construction.<sup>98</sup>

Water Balance and Water Quality Modeling: INAC recommended to the Board that AEM submit a water balance and water quality modeling report and recalibrate the model as necessary every three months for the initial two years of mine operation, and annually thereafter.<sup>99</sup> The purpose of regular monitoring is to allow for confidence in the water quality modeling results and the eventual release of water. The Board agrees with

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<sup>97</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 15, 2008, at p. 353.

<sup>98</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 16, 2008, at p. 285.

<sup>99</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 15, 2008, at pp. 124-125.

AEM's concern that three months is a very short duration given that with frozen conditions data is not available every month of the year and there will likely be minimal differences from one report to the next every three months.<sup>100</sup> The Board accepts that the purpose for requiring regular monitoring can be achieved with the submission of a Water Balance and Water Quality Modeling Report (Water Balance Report) every six months for the first two years of the mine's operation, following which the Water Balance Report is to be prepared and submitted annually.

The Board requires the Water Balance Report to compare and interpret, predicted and measured parameters, and the model to be re-calibrated as necessary in accordance with the Action Plan criteria outlined in section 3.2.5.2 of the Water Quality and Flow Monitoring Plan (August 2007), and at a minimum of once every two years following the commencement of operations. The results and implications of the re-calibrated model shall be reported to the Board.

The Board further requires AEM to carry out weekly inspections of all water management structures during periods of flow and maintain records for review upon the request of an Inspector.

## **PART F: CONDITIONS APPLYING TO WASTE DISPOSAL AND MANAGEMENT**

From an enforcement and compliance perspective, the Board endeavored to write this licence fairly and properly; the Board strives to outline clearly the discharge parameters and other limits of the Licence in a way that will not over-regulate the Project, leading to potential over enforcement. The Board is also aware of the risks to water quality in Nunavut posed by under-regulation.

Waste Rock and Tailings Cover: The Board agrees with EC that the management of tailings and waste rock from the mine is critical to the long term impact of the Project.<sup>101</sup> As discussed by EC, a key component to this is the establishment of a waste rock segregation protocol and routine audit to confirm that the rules for segregating rock are working.<sup>102</sup> The Board agrees this is essential to ensuring that rock that is potentially acid generating or metal leaching is properly disposed of, and that cover rock is effective. The Board also agrees with EC that till rock should be characterized to determine if it will generate acid rock drainage. Accordingly, the Board requires AEM to submit to the Board for review and approval within 6 months of the Licence approval, a revised Mine Waste and Water Management Plan that includes a protocol for segregating rock, confirming the segregation rules, monitoring till rock for acid drainage potential, and a protocol for distinguishing seepage through facilities.

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<sup>100</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 15, 2008, at p. 134.

<sup>101</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 15, 2008, at pp. 124-125.

<sup>102</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 15, 2008, at pp. 124-125.

As stated previously, one of the primary reasons for the significant difference in the security estimates provided by AEM compared to KIA and INAC, is the required depth of Ultramafic rock capping layer over potentially acid generating waste rock and tailings. INAC uses a depth of 4 metres on the basis of the Ekati diamond mine experience, while AEM used a 2.5 metre depth, arguing that the comparison to Ekati is not valid:

...Meadowbank is a different climate setting as evidenced by deeper permafrost and shallower active layers. Ekati is predicted to slip out of the continuous permafrost zone while Meadowbank remains within the zone under most aggressive global warming predictions.<sup>103</sup>

Accordingly, to aid in future assessments of security requirements, including assessing any progressive reclamation that takes places in the interim, and to facilitate closure and reclamation planning and contingency planning, the Board also requires the Mine Waste and Water Management Plan to include field testing of cover during the operating life of the mine, including the installation of instrumentation and monitoring of freezeback efficiency and cap performance, and the review, evaluation and response to future changes.

Sewage Treatment: The Board requires AEM to submit within 90 days of approval of the Licence, an Operation and Maintenance Manual for the Sewage Treatment Plant prepared in accordance with the *Guidelines for the Preparation of an Operating and Maintenance Manual for Sewage and Solid Waste Disposal Facilities in the Northwest Territories: 1996*.

Landfills and Landfarm: As recommended by the GN-DOE, the Board requires AEM to provide construction drawings for review prior to construction for landfill number 1 and landfill number 2, and as-built drawings for both landfills and the landfarm following construction.<sup>104</sup>

The Board requires that the Landfill Management Plan be revised to include a protocol for placement of material in the landfills and reflect the handling and segregation of asbestos, equipment containing ozone depleting substances such as refrigerators and light bulbs, and fluorescent lamp tubes, according to the relevant Federal and Territorial guidelines as recommended by GN-DOE and committed to by AEM.<sup>105</sup> The Board also accepts INAC's recommendation that AEM monitor liquid seepage from the solid waste management sites and sump from the landfarm and report the results to the NWB in the annual report.<sup>106</sup>

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<sup>103</sup> Exhibit 2, Hard Copy of the AEM Public Hearing Presentation, April 2008, Slide titled Reclamation Security Estimates – Why the big difference? (slide not numbered).

<sup>104</sup> Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 16, 2008, at pp. 298-299.

<sup>105</sup> Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 16, 2008, at p. 299.

<sup>106</sup> See INAC Written Submission, pp. 8 and 10.

Prior to solid waste being disposed of in the Baker Lake municipal land fill, the Board requires AEM to obtain the written permission of the Hamlet of Baker Lake and submit a copy of the permission to the Board.

The Board also requires that the Landfarm Management Plan be updated to reflect compliance with both the CCME Canada-wide standards and the relevant GN-DOE guidelines, and additional parameters for which AEM has committed to GN-DOE to monitor and related contingency plans.<sup>107</sup>

#### Portage Attenuation Pond

As the existing aluminum concentrations in groundwater persist above the Canadian Environmental Quality Guidelines (CEQG),<sup>108</sup> the Board accepts EC's recommendation to regulate total and dissolved aluminum at 1.5 mg/L and 1.0 mg/L respectively.<sup>109</sup>

The Board has carefully considered the discussion between AEM and EC over whether to set target objectives or regulate discharge criteria for turbidity. Based on the evidence provided by EC on the practical impact of monitoring for both total suspended solids and turbidity at the Diavik Diamond Mine in the Northwest Territories, the Board accepts the inclusion of turbidity as a regulated parameter for effluent from pit dewatering in order to protect the existing ultra-oligotrophic receiving environment.<sup>110</sup> The Board accepts EC's recommendation to regulate turbidity no higher than 15 mg/L.<sup>111</sup>

The Board also considered the discussion between AEM and EC over effluent quality criteria proposed for chloride. The Board heard that AEM's maximum predicted discharge concentration for chloride under the possible poor end scenario is 441 mg/L.<sup>112</sup> Accordingly, AEM's proposed discharge limit of 2000 mg/L is multiple times the predicted level. While the Board agrees with AEM that the discharge limit should accommodate variations in pit water quality,<sup>113</sup> the Board believes this is accomplished by accepting EC's recommendation to limit the level of chloride to 1000 mg/L,<sup>114</sup> which is more than double the predicted poor end maximum.

#### Vault Attenuation Pond

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<sup>107</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 16, 2008, at pp. 299-302.

<sup>108</sup> See Environment Canada's Intervention Respecting the Agnico-Eagle Mines Ltd. Water Licence Application for the Meadowbank Gold Project, March 31, 2008, Issue 3.1 – Baseline Groundwater Quality Data, at p. 12. [Hereinafter "EC Written Submission"].

<sup>109</sup> See EC Written Submission, Appendix B-Proposed Effluent Quality Criteria, at p. 24.

<sup>110</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 16, 2008, at pp. 249-252.

<sup>111</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 16, 2008, at p. 362.

<sup>112</sup> See EC Written Submission, Issue 2.4 Effluent Quality Criteria, at p. 8.

<sup>113</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 16, 2008, at pp. 266-267

<sup>114</sup> See EC Written Submission, Issue 2.4 Effluent Quality Criteria, at pg. 8.

Existing aluminum concentrations persist above the CEQG in groundwater.<sup>115</sup> Accordingly, the Board agrees with EC's recommendation to regulate total and dissolved aluminum at 1.5 mg/L and 1.0 mg/L respectively<sup>116</sup>.

As discussed above in relation to the Portage Attenuation Pond, the Board also accepts EC's recommendation to regulate turbidity at 15 mg/L.<sup>117</sup> Similarly, the Board recognizes that AEM's maximum predicted discharge concentration for chloride under the possible poor end scenario is less than 3 mg/L and that AEM's proposed discharge limit of 1000 mg/L is many times greater than the predicted level.<sup>118</sup> Given the smaller receiving water volume of Wally Lake in comparison to Third Portage Lake, the NWB agrees with EC that the discharge criteria for the Vault Attenuation pond should be lower than that set for the Portage Attenuation Pond. Consistent with the discharge ratio for Portage and Vault Attenuation Ponds proposed by AEM, the Board sets a discharge limit of 500 mg/L for the Vault Attenuation Pond.

The Board also considered the discussion between AEM and EC regarding the effluent discharge limit for ammonia. Given the importance of passing bioassay tests on effluent and the natural degradation process of ammonia and acknowledging that AEM is required under the Licence to develop and implement an Ammonia Management Plan to control ammonia at the source. The Board agrees with EC to regulate Ammonia (NH<sub>3</sub>-N) at 20 mg/L.<sup>119</sup>

The Board also notes that EC and AEM came to an agreement regarding the discharge criteria to be set for nitrate (NO<sub>3</sub>-N) levels and has set discharge criteria accordingly at 50 mg/L.<sup>120</sup>

#### Non-Contact Water Diversion

The Board agrees with AEM to regulate TSS at non-contact water diversions during operations and closure.<sup>121</sup> The Board also accepts INAC's recommendation to include both maximum average monthly concentrations and grab sample concentrations in the Licence.<sup>122</sup>

#### Mine Site Fuel Storage Containment Facilities

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<sup>115</sup> See EC Written Submission, Issue 3.1 – Baseline Groundwater Quality Data, at p.12.

<sup>116</sup> See EC Written Submission, Appendix B-Proposed Effluent Quality Criteria, at p. 24.

<sup>117</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 16, 2008, at p. 362.

<sup>118</sup> See EC Written Submission, Issue 2.4 Effluent Quality Criteria, at p. 8.

<sup>119</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 16, 2008, at pp. 268-269

<sup>120</sup> See Exhibit 1 Electronic copy of AEM Public Hearing Presentation\_r<sup>3</sup>, April 2008, at p. 63. See also Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 16, 2008, at p. 253.

<sup>121</sup> See Exhibit 1 Electronic copy of AEM Public Hearing Presentation\_r<sup>3</sup>, April 2008, at p.55.

<sup>122</sup> See INAC Written Submission, at p. 10.

The Board agrees with the discharge criteria proposed by AEM for effluent discharged to the land from the landfarm and fuel storage containment facilities.<sup>123</sup>

## **PART G: CONDITIONS APPLYING TO MODIFICATIONS**

Pursuant to Article 12 and section 12.4.3 of the NLCA, a proposed modification submitted under this Licence may require a screening determination by the NIRB. It is the responsibility of the License holder to notify and consult with NIRB to ensure Article 12 requirements are met prior to submission of a modification request to the NWB under the Licence.

## **PART H: CONDITIONS APPLYING TO EMERGENCY RESPONSE AND CONTINGENCY PLANNING**

GN-DOE advised the Board that it is satisfied with the Spill Contingency Plan as submitted by AEM, with the exception that a detailed contingency plan to temporarily store contaminated soil at the tank farm burn area or construct a second landfarm to accommodate the spill materials in the event of a large spill that the landfarm cannot be accommodated be incorporated into the planning.<sup>124</sup> The Board accepts GN-DOE's recommendation and further requires AEM to submit within 30 days of the approval of the Licence by the Minister a revised Spill Contingency Plan that also consolidates all mine related activities, including the All Weather Private Access Road and the Baker Lake Marshalling Facility.

The Board also requires AEM to submit for review and approval within 90 days following the construction of each dike, an emergency preparedness plan that addresses the consequences of dike failure. Further, at least 90 days prior to commencing operations, a revised and consolidated Emergency Response Plan, covering the activities included in the scope of the Licence taking into account as-built designs and emergency preparedness plans that address the consequence of dike failures be submitted.

The Board also accepts GN-DOE's recommendation that the Spill Contingency Plan and the Emergency Response Plan be updated annually to reflect changes in operation and technology.<sup>125</sup>

## **PART I: CONDITIONS APPLYING TO GENERAL AND AQUATIC EFFECTS MONITORING**

As stated previously, the MMER apply to this project. Section 73 of the NWNSRTA requires the Board to set conditions at least as stringent as conditions prescribed by

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<sup>123</sup> See Exhibit 1 Electronic copy of AEM Public Hearing Presentation\_r<sup>3</sup>, April 2008, at p. 65.

<sup>124</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 16, 2008, at p. 302.

<sup>125</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 16, 2008, at p. 302.

regulation pursuant to subsection 36(5) of the *Fisheries Act*.<sup>126</sup> Furthermore, for the purpose of ensuring compliance with the licence or regulations, an Inspector designated by the Minister may inspect or examine works, waters or waste and exercise other powers according to the NWNSRTA.<sup>127</sup> For the purpose of monitoring, the Board may include conditions in its licence regarding monitoring programs to be undertaken.<sup>128</sup>

The Board has considered the recommendations on the aquatic monitoring parameters and accepts EC's recommendations to include monitoring diffuser discharges for a full suite of parameters made up of AEM's proposed Schedule 4 parameters with the addition of total petroleum hydrocarbons (TPH) and turbidity, and to monitor for Schedule 4 parameters at pit lake sites.<sup>129</sup> The Board also accepts EC's recommendation to monitor Portage and Vault area diversion ditches for aluminum,<sup>130</sup> to monitor the Tailings Storage Facility for nitrogen compounds including cyanide,<sup>131</sup> to monitor Portage, Goose and Vault Pit lake discharges for a full suite of parameters,<sup>132</sup> and to include total metals in the monitoring of waste rock piles and the Vault Attenuation Pond annually immediately following spring freshet.<sup>133</sup>

The Board further agrees with EC's recommendation to add Radium226 as a parameter to be monitored under the MMER list.<sup>134</sup> The Board also requires AEM to add a monitoring location for potential discharge to the environment from Landfarm facility.

The Board also requires AEM to submit a Groundwater Monitoring Plan, including detail on the installation of permanent monitoring wells, for review and approval.

The Board further accepts EC's recommendation that a consolidated Aquatic Effects Management Plan (AEMP) be submitted to harmonize the various water monitoring requirements for the Project, including NWB compliance monitoring, aquatic effects monitoring for discharges into the receiving environment, environmental effects monitoring (EEM) pursuant to the MMER, groundwater monitoring pursuant to the Ground Water Monitoring Plan, and DFO Fisheries authorization monitoring.<sup>135</sup> Separate from the EEM, the AEMP is to require annual reporting for more immediate adaptive

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<sup>126</sup> Section 73 of the NWNSRTA states:

73 Where the Board issues a licence in respect of any waters to which regulations made under subsection 36(5) of the *Fisheries Act* apply, any conditions in the licence relating to the deposit of waste in those waters shall be at least as stringent as the conditions prescribed by those regulations.

<sup>127</sup> See sections 85 to 94 of the NWNSRTA.

<sup>128</sup> See paragraph 70(1)(c) of the Act.

<sup>129</sup> See EC Written Submission, at p.6.

<sup>130</sup> See EC Written Submission, at p.6.

<sup>131</sup> See EC Written Submission, at p.6. See also Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 16, 2008, at p. 248

<sup>132</sup> See EC Written Submission, at p.6.

<sup>133</sup> See EC Written Submission, at p.6. See also Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 16, 2008, at p. 274.

<sup>134</sup> See EC Written Submission, at p.7.

<sup>135</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 16, 2008, at pp. 245-246.

management, mechanisms to measure changes to productivity in the lake as a result of the mine adding nutrients, and construction phase sampling for the construction of dikes and dewatering. The AEMP is also to include detailed monitoring protocol to verify AEM's commitment to meet the *Canadian Council of Ministers of Environment Fresh Water Aquatic Life Guidelines* thirty metres from the outfall diffusers.<sup>136</sup>

Conscious of the Board's jurisdiction, the Board carefully considered INAC's concern that ash and other particulate material remaining after incineration will be placed in the landfill and may become sources of leachate:

Although incineration is not normally thought to fall under the Waters Act, the ash and other particulate material remaining after incineration will be placed in the landfill and may become sources of leachate. Agnico-Eagle should provide a clear indication of these materials to be burned and the efficiency of the incinerator. Emissions may be used to indicate what types of byproducts are formed within the incinerator.<sup>137</sup>

The Board also understands that in addition to the potential contamination from leachate, incineration standards are also important to water quality because emissions and toxic contaminants, including dioxins and furans, from incineration may start as air emissions but these contaminants are eventually deposited to soil and introduced to water bodies through runoff or erosion. These toxins settle in the sediments in the bottom of water bodies, are ingested by benthic invertebrates, which are eaten by fish and ultimately make their way into the food chain

Accordingly, the Board accepts INAC's recommendation that AEM monitor the materials to be burned and the efficiency of the incinerator. Furthermore, as operating practices are crucial to the effective use of even the best technology and AEM informed the Board that it has not yet refined standard operating procedures for spreading incinerator ash in the landfill,<sup>138</sup> the Board accepts EC's recommendation that an Incineration Management Plan, including best practices for ash disposal, be developed as a condition of the Licence.<sup>139</sup>

## **PART J: CONDITIONS APPLYING TO ABANDONMENT, RECLAMATION AND CLOSURE**

The Board requires AEM to prepare an Interim and eventually a Final Closure and Reclamation Plan in accordance with the *Mine Site Reclamation Guidelines for the Northwest Territories, 2007* and consistent with the *INAC Mine Site Reclamation Policy for Nunavut, 2002*. The Interim Closure and Reclamation Plan is required within six

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<sup>136</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 15, 2008, at pp. 82-83.

<sup>137</sup> Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 15, 2008, at p. 128.

<sup>138</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 15, 2008, at p. 63.

<sup>139</sup> See EC Written Submission, at p. 17.



months of the start of ore processing, and must consider all of the mine related components, the All Weather Private Access Road and Baker Lake Marshalling Facility. A Final Closure and Reclamation Plan is required at least 12 months prior to the closure of the mine.

The recommendations provided by the parties in their written submissions are contemplated within the Guidelines and therefore not specifically addressed as terms and conditions of the Licence unless otherwise stated in the Licence. The Board further encourages AEM to consider the submissions that have been made with respect to abandonment, reclamation, and closure in preparation of both the Interim and Final Closure and Reclamation Plans.

## **SCHEDULES**

Schedules provide instructive detail to the conditions appearing in more general terms in the main body of the Licence and are spelled out in this format for greater clarity. Except for Schedule A, the schedules provide specific requirements for Plans to be submitted to the Board.

## **ISSUES OUTSIDE THE JURISDICTION OF THE BOARD**

The Board acknowledges the concerns raised by Baker Lake residents about the potential impact of spills from shipping barges contaminating Baker Lake:

How long -- if there was a spill, how long would it take the Government to mobilize people to get into the community? Last July at breakup, one of the barges that had contained fuel in this community leaked, and nothing was done for at least two days, and because of where I live in the community, you could see the oil just -- or the fuel or whatever was in the barge just descending out on the lake. It eventually was cleaned up, but it took a long time, and it -- if it was a larger spill and with the currents in the water, it would have gone a long way.

So I'm wondering how long the response would be if it was a major spill; and that's a potential, there's a potential for that happening with the location of the tank farm because it is higher than the lake. It's on bedrock. I am aware of that, but it is higher than the lake, and we all know that gravity flows downward. Thank you, Mr. Chairman.<sup>140</sup>

The Board is also aware that the GN-DOE has capacity issues with regard to spills and the number of people that are trained to handle such incidences.<sup>141</sup>

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<sup>140</sup> Ms. Barb Mueller, Baker Lake, Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 16, 2008, at pp. 317-318.

<sup>141</sup> See Nunavut Water Board Hearing Re: Meadowbank Gold Mine Project Type A Water Licence, Hearing Transcript, April 16, 2008, at p. 318.

The Board's jurisdiction does not extend to the use of water for navigation;<sup>142</sup> however, the Board encourages the GN-DOE, the Hamlet of Baker Lake, other municipalities and the Coast Guard to work together to share training resources and information about available spill response equipment, trained personnel and other related resources to ensure timely responses to navigation related spills. Ideally, this will result in a coordinated response plan prior to a major spill occurring.

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<sup>142</sup> Section 4 of the NWNSRTA defines "use" in relation to water as:

"use", in relation to waters, means a direct or indirect use of any kind, including, but not limited to,

- (a) any use of water power and geothermal resources;
- (b) any diversion or obstruction of waters;
- (c) any alteration of the flow of waters; and
- (d) any alteration of the bed or banks of a river, stream, lake or other body of water, whether or not the body of water is seasonal.

However, it does not include navigation or any other use connected with shipping activities that are governed by the Canada Shipping Act, 2001. [Emphasis Added.]

## **APPENDIX A – LIST OF SUBMISSIONS AND CORRESPONDENCE**

### **MEADOWBANK PROJECT 2AM-MEA APPENDIX A LIST OF SUBMISSIONS & CORRESPONDENCE**

#### Application:

1. Cover letter and initial submission of application for water licence by Cumberland Resources Ltd. dated March 31, 2003.

#### Initial Submission & Correspondence:

1. Letter to Philippe di Pizzo, Executive Director, NWB dated March 31, 2003, received April 7, 2003 Re: Project Description Report Meadowbank Gold Project, Craig Goodings, Manager Environmental & Regulatory Affairs, Cumberland Resources Ltd.
2. Submitted April 7, 2003 by Cumberland Resources Ltd. Supplementary Questionnaire for Mine Development
3. Submitted April 7, 2003 by Cumberland Resources Ltd. Project Description Report
4. Letter to Philippe di Pizzo, Executive Director, NWB dated May 30, 2003 Re: NWB1MEA – Application for Water Licence – Meadowbank Gold Project, Colette Meloche, Environmental Assessment Specialist, Environment Canada
5. Letter to Phyllis Beaulieu, Acting Licensing Administrator, NWB dated May 30, 2003 received June 1, 2003 Re: Application for Water Licence, Michael Roy, Qikiqtani Regional Coordinator Water Resources, Indian & Northern Affairs Canada.
6. Letter to Philippe di Pizzo, Executive Director, NWB dated May 31, 2003 received June 2, 2003 Re: Application for Water License – Meadowbank Gold Project NWB File # NWB1MEA, Earle Baddaloo, Environmental Protection Services, Department of Sustainable Development.
7. Letter to Brian Aglukark, Manager Regional Planning, Nunavut Planning Commission dated April 23, 2003 Re: Cumberland Resources Ltd. – Meadowbank Gold Project - Land Use Plan Conformity Review – New, Phyllis Beaulieu, A/Licensing Administrator, NWB.

8. Letter to Stephanie Briscoe, Executive Director, Nunavut Impact Review Board dated July 18, 2003 Re: Application for Licence – Meadowbank Gold Project, Philippe di Pizzo, Executive Director, NWB.
9. Letter to Honorable Robert D. Nault, Minister of Indian & Northern Affairs, Indian & Northern Affairs Canada dated August 27, 2003 Re: Development of Meadowbank Gold Project, Thomas Kudloo, Chairperson, NWB.
10. Letter to Joe Murdock, Director of Technical Services, NWB dated February 23, 2007 Re: Preliminary draft guidelines for Meadowbank Water License, Mike Atkinson, Manager Environmental Assessment & Land Use, Government of Nunavut Department of Environment.
11. Memo to Local Organizations dated August 25, 2003 Re: Notice of Application NWB1MEA, Phyllis Beaulieu, Licensing Administrator, NWB.
12. Memo to News North dated August 26, 2003 Re: Request to Place Ad for NWB1MEA, Phyllis Beaulieu, Licensing Administrator, NWB
13. Letter to Joe Murdock, Director of Technical Services, NWB dated February 23, 2007 Re: NWB 2AM-MEA – Cumberland Resources Ltd. – Meadowbank Gold Project Nunavut Water Board Draft Guidelines for Application, Colette Spagnuolo, Environmental Assessment/Contaminated Site Specialist, Environment Canada
14. Letter to Joe Murdock, Director of Technical Services, NWB dated February 25, 2007 Re: Fisheries and Oceans Canada (DFO) Comments on the Nunavut Water Board (NWB) Preliminary Guidelines for Applicant – Cumberland Resources Ltd. – Meadowbank Project, Tania Gordanier, Habitat Management Biologist, Fisheries and Oceans Canada.
15. Letter to Phyllis Beaulieu, Manager Licensing, NWB dated February 23, 2007 received March 2, 2007 Re: Nunavut Water Board Preliminary Guidelines for Applicant – Cumberland Resources Ltd. – Meadowbank Project, Jim Rogers, Manager Water Resources, Indian and Northern Affairs Canada.
16. Letter to Louise Grondin, Vice-President Environment, AEM dated July 9, 2007 Re: Decommissioning, Restoration and Monitoring Plans for the All-Weather Private Access Road Stream Crossings – Meadowbank Gold Project, Nunavut, Amy Liu, Senior Habitat Biologist, Fisheries & Oceans Canada.
17. Letter to Dionne Filiatrault, Executive Director, NWB dated July 19, 2007, received July 19, 2007 Re: Meadowbank Project – Application for Type B Water License for the Baker Lake Tank Farm and Marshalling Area, Louise Grondin, Vice-President Environment, AEM

18. Letter to Dionne Filiatrault, Executive Director, NWB, dated August 30, 2007  
Re: Meadowbank Project – Type A Water Licence Application, Louise Grondin, Vice-President Environment, AEM
19. Submitted September 4, 2007 by AEM Expert Review of Meadowbank Tailings and Dewatering Dike Designs
20. Submitted September 4, 2007 by AEM Independent Review of Pit Slope Design Criteria for the Portage and Goose Island Deposits (dated April 14, 2007 and undertaken by Stacey Mining Geotechnical Ltd.)
21. Submitted September 4, 2007 by AEM Cumberland Resources, Meadowbank Gold Project No Net Loss Plan (NNLP)
22. Submitted September 4, 2007 by AEM Technical Memorandum to Tania Gordanier dated February 7, 2007 Re: Cumberland Meadowbank NNLP – Habitat Compensation Addendum, from Gary Mann & Randy Baker (Azimuth)
23. Submitted September 4, 2007 by AEM Curricula Vitae for Supporting Documents of Type A Water Licence application
24. Submitted September 4, 2007 by AEM Aquatic Effects Management Program (October 2005)
25. Submitted September 4, 2007 by AEM (Document 516) Water Quality Predictions
26. Submitted September 4, 2007 by AEM (Document 511) Preliminary Closure & Reclamation Plan
27. Submitted September 4, 2007 by AEM (Document 500) Mine Waste & Water Management
28. Submitted September 4, 2007 by AEM (Document 499) Updated Predictions of Brackish Water Upwelling in Open Pits with Mining Rate of 8500 TPD
29. Submitted September 4, 2007 by AEM (Document 498) Landfarm Option Analysis
30. Submitted September 4, 2007 by AEM (Document 497) Assessment of Effluent Dilution Potential for the Third Portage Lake Diffuser
31. Submitted September 4, 2007 by AEM (Document 492) Report Addendum Detailed Design of Dewatering Dikes

32. Submitted September 4, 2007 by AEM (Document 485) Type A Water License Application
33. Submitted September 4, 2007 by AEM (Document 483) Spill Contingency Plan
34. Submitted September 4, 2007 by AEM (Document 482) Emergency Response Plan
35. Submitted September 4, 2007 by AEM (Document 467) Proposed Water Treatment Methods
36. Submitted September 4, 2007 by AEM (Document 458) Landfill Design and Management Plan
37. Submitted September 4, 2007 by AEM (Document 457) Hazardous Materials Management Plan
38. Submitted September 4, 2007 by AEM (Document 450) Water Quality and Flowing Monitoring Plan
39. Submitted September 4, 2007 by AEM (Document 449) Pit Slope Design Criteria for the Portage and Goose Island Deposits Volume1-2
40. Submitted September 4, 2007 by AEM (Document 432) Fault Testing And Monitoring Plan
41. Submitted September 4, 2007 by AEM (Document 425) Operational ARD/ML Sampling & Testing Plan
42. Submitted September 4, 2007 by AEM (Document 420) Final Report Detailed Design of Central Dike Volumes 1-3
43. Submitted September 4, 2007 by AEM (Document 412) Conceptual Design of the Effluent Outfall Diffuser For Wally Lake
44. Submitted September 4, 2007 by AEM (Document 383) Evaluation of Tailings Management Alternatives
45. Submitted September 4, 2007 by AEM (Document 375) Mitigative Measures for Potential Seepage from Tailings Facility
46. Submitted September 4, 2007 by AEM (Document 355) Sewage Treatment System

47. Submitted September 4, 2007 by AEM (Document 342 Volumes 1-3) Detailed Design of Dewatering Dikes Meadowbank Gold Project
48. Submitted September 4, 2007 by AEM (Document 317) 2006 Baseline Ground Water Quality
49. Submitted September 7, 2007 by AEM (Document 515) Proposed Discharge Water Quality Criteria for the Portage and Vault Attenuation Ponds
50. Submitted September 7, 2007 by AEM (Document 502) Type A Water License Application Documents
51. Letter to Amy Liu, Senior Habitat Biologist, Fisheries and Oceans Canada dated September 17, 2007 Re: Detailed Design of fish habitat compensation at cross R02, Louise Grondin, Vice-President Environment, AEM.
52. Submitted September 18, 2007 by AEM, Design Report on R02 Fisheries Habitat Compensation Design All Weather Private Access Road Meadowbank Gold Project Nunavut dated September 14, 2007.
53. Letter to Louise Grondin, Vice-President, AEM dated September 20, 2007 Re: Application Acknowledgement for the Meadowbank Project, Richard Dwyer, Licensing Administrator, NWB
54. Letter to Richard Dwyer, Licensing Administrator, NWB, dated September 24, 2007 Re: Meadowbank Project – Type A Water License Application, Louise Grondin, Vice-President Environment, AEM
55. Letter to Louise Grondin, Vice-President, AEM dated October 2, 2007 Re: Acknowledgement and Receipt of Application Fee – New Water License Application – Meadowbank Project, Richard Dwyer, Licensing Administrator, NWB.
56. Letter to Louise Grondin, Vice-President Environment, AEM, dated October 4, 2007 Re: Application for a Type “A” Water Licence, Dionne Filiatrault, Executive Director, NWB.
57. E-mail to Dionne Filiatrault, Executive Director, NWB, dated October 5, 2007 Re: Receipt of Agnico-Eagle “A” Licence Application, John Donihee, Agnico-Eagle Counsel for Meadowbank Project, John Donihee Professional Corporation.
58. Letter to Phyllis Beaulieu, Manager Licensing, NWB, dated October 4, 2007, received October 11, 2007 Re: 2AM-MEA – Meadowbank Mining Corporation – Meadowbank Gold Project – Technical Memorandum: Sewage

Treatment System to be used at Meadowbank Gold Project, Froeydis Reinhart, Pollution Policy Specialist, Indian & Northern Affairs Canada.

59. Submitted October 10, 2007 by AEM Concordance Table with Project Certificate (NIRB 2006) and Type – A Water License Guidelines (NWB 2007) (Document 528)
60. E-mail to Richard Dwyer, Licensing Administrator, NWB, dated October 17, 2007 Re: Meadowbank License A hard copy, Louise Grondin, Vice-President Environment, Agnico-Eagle Mines Limited.
61. Letter to Larry Connell, Regional Manager Environment, Agnico-Eagle Mines Limited, dated October 19, 2007 Re: Fish Habitat Compensation Detailed Design for the All-Weather Private Access Road (AWPAR), Meadowbank Gold Project, Amy Liu, Senior Habitat Biologist.
62. Letter to Phyllis Beaulieu, Manager Licensing, NWB, dated October 4, 2007 received November 1, 2007 Re: 2AM-MEA – Meadowbank Mining Corporation – Meadowbank Gold Project – Technical Memorandum; Sewage Treatment System to be used at Meadowbank Gold Project, Froeydis Reinhart, Pollution Policy Specialist, Indian & Northern Affairs Canada.
63. Letter to Richard Dwyer, Licensing Administrator, NWB dated November 2, 2007 Re: NWB File # 2AM-MEA – Agnico-Eagle Mines Ltd. – Conformity Assessment on Meadowbank Water License Application, Helen Yeh, Environmental Assessment Coordinator, Government of Nunavut Department of Environment.
64. Letter to Phyllis Beaulieu, Manager Licensing, NWB dated November 2, 2007 Re: 2AM-MEA Agnico-Eagle Mines Limited – Meadowbank Gold Project Water License Application – NWB Preliminary Guidelines Conformity Review, Cindy Parker, Environmental Assessment Specialist, Environment Canada.
65. Letter to Phyllis Beaulieu, Manager Licensing, NWB dated November 2, 2007 Re: 2AM-MEA – Meadowbank Gold Project Water License Application – Meadowbank Mining Corporation – Agnico-Eagle Mines Ltd., Jim Rogers, Manger Water Resources, Indian & Northern Affairs Canada.
66. Letter to Phyllis Beaulieu, Manager Licensing, NWB dated November 2, 2007 received November 5, 2007, Re: Conformity Review of the Nunavut Water Board Application for a Type “A” Water License, Amy Liu, Habitat Management Biologist, Fisheries and Oceans Canada.
67. Letter to Phyllis Beaulieu, Manger Licensing, NWB dated November 5, 2007 Re: 2AM-MEA – Meadowbank Gold Project Water License Application –



Meadowbank Mining Corporation – Agnico-Eagle Mines Ltd., Jim Rogers,  
Manager Water Resources, Indian & Northern Affairs Canada.

68. Letter to Dionne Filiatrault, Executive Director, NWB dated November 6, 2007, received November 7, 2007 Re: The Nunavut Impact Review Board's 2007 Annual Monitoring Report for the Meadowbank Gold Project, Amanda Hanson, Assistant Technical Advisor, Nunavut Impact Review Board.
69. Letter to Dionne Filiatrault, Executive Director, NWB dated November 9, 2007, received November 13, 2007, Re: Agnico-Eagle Mines Limited Meadowbank Gold Project, Nunavut Conflict of Interest for Hatch Involvement Water Licence Application Review Process, Warren Gendzelevich, Manager of Operations, Hatch Limited
70. Letter to Larry Connell, Regional Manager Environment, AEM dated November 13, 2007 Re: Application for a Type "A" Water Licence, David Hohnstein, A/Director Technical Services, NWB.
71. Submitted November 19, 2007 by AEM, Concordance Table with Project Certificate (NIRB 2006) and Type – A Water License Guidelines (NWB 2007) (Document 528)
72. Submitted November 19, 2007 by AEM, 070927 NWB Amended No.502 and Table 1.1 Conformity Document Tables
73. Letter to Amy Liu, Fisheries and Oceans Canada, dated November 19, 2007, Re: Meadowbank Gold Project – Authorization for Works or Undertakings Affecting Fish Habitat – All Weather Private Access Road – Request for Amendment, Larry Connell, Regional Manager of Environment, AEM
74. Letter to Dionne Filiatrault, Executive Director, NWB dated November 9, 2007, received November 23, 2007, Re: Agnico-Eagle Mines Limited Meadowbank Gold Project, Nunavut Conflict of Interest for Hatch Involvement Water Licence Application Review Process, Warren Gendzelevich, Manager of Operations, Hatch
75. Mail Logged November 23, 2007 list of intervener requests for hard copy and CD copy of Meadowbank Type A application.
76. Letter to Richard Dwyer, Licensing Administrator, NWB dated November 23, 2007, Re: 2AM-MEA – Meadowbank Gold Project Water License Application – Incorporation of Type B Water License 8BC-MEA0709 and Type B Water License 8BC-TEH0708 into the Type A Water License
77. Letter to Richard Dwyer, Licensing Administrator, NWB dated November 23, 2007, Re: 2AM-MEA – Meadowbank Gold Project Water License

Application – Requirement under the NWB Guidelines for Submission of Documents Signed by Professionals, Larry Connell, Regional Manager of Environment, AEM

78. Submitted November 25, 2007 by AEM, Meadowbank Type A Water Licence Application – Conformity Table
79. Letter to Richard Dwyer, Licensing Administrator, NWB dated November 26, 2007, Re: 2AM-MEA – Meadowbank Gold Project Water License Application Supplementary Information on Sewage Treatment Plant, Larry Connell, Regional Manager of Environment, AEM
80. Letter to Richard Dwyer, Licensing Administrator, NWB dated November 26, 2007, Re: 2AM-MEA – Meadowbank Gold Project Water License Application Supplementary Information on Explosives Storage Facilities, Larry Connell, Regional Manager of Environment, AEM
81. Letter to Richard Dwyer, Licensing Administrator, NWB dated November 26, 2007, Re: 2AM-MEA – Meadowbank Gold Project Water License Application Supplementary Information on Ore Storage, Larry Connell, Regional Manager of Environment, AEM
82. Submitted November 27, 2007 by AEM, Meadowbank Gold Project Operational ARD/ML Sampling and Testing Plan (Document 532) (dated August 2007)
83. Submitted November 27, 2007 by AEM, Meadowbank Gold Project Water Quality and Flow Monitoring Plan (Document 450) (dated August 2007)
84. Submitted November 27, 2007 by AEM, Landfill Design and Management Plan Supplementary Information Meadowbank Gold Project, Nunavut (Document 562)
85. Letter to Dionne Filiatrault, Executive Director, NWB dated November 26, 2007, received November 27, 2007, Re: 2AM-MEA – Meadowbank Gold Project Water License Application, Larry Connell, Regional Manager of Environment, AEM
86. Letter to Larry Connell, Regional Manager of Environment, AEM dated November 27, 2007 Re: Landfill Design and Management Plan Supplementary Information Meadowbank Gold Project, Nunavut, Colin L.Y. Wong, P. Eng & John Hull, P. Eng , Golder Associates Ltd.
87. Submitted November 28, 2007 by AEM, Report on Design for the Third Portage Lake Effluent Outfall Diffuser Meadowbank Gold Project Nunavut (Document 536)

88. Submitted November 28, 2007 by AEM, Report on Landfarm Design and Management Plan Meadowbank Gold Project (Document 564)
89. Submitted November 28, 2007 by AEM, Report on Water Quality Predictions Meadowbank Gold Project Nunavut (Document 516)
90. Submitted November 29, 2007 by AEM, Report on Blast Design Meadowbank Gold Project Nunavut dated February 10, 2004
91. Submitted November 29, 2007 by AEM, Re: Blasting Report Addendum dated May 25, 2004.
92. Submitted November 29, 2007 by AEM, Re: Item#85/85A – Meadowbank Gold Project – Blasting Addendum dated October 6, 2005
93. Letter to Richard Dwyer, Licensing Administrator, NWB dated November 23, 2007, received December 3, 2007, Re: 2AM-MEA – Meadowbank Gold Project Water License Application – Incorporation of Type B Water License 8BC-MEA0709 and Type B Water License 8BC-TEH0708 into Type A Water License, Larry Connell, Regional Manager of Environment, AEM
94. Letter to Richard Dwyer, Licensing Administrator, NWB dated November 23, 2007, received December 3, 2007, Re: 2AM-MEA – Meadowbank Gold Project Water License Application – Requirement under the NWB Guidelines for Submission of Documents Signed by Professionals, Larry Connell, Regional Manager of Environment, AEM
95. Letter to Dionne Filiatrault, Executive Director, NWB dated November 26, 2007, received December 3, 2007, Re: 2AM-MEA – Meadowbank Gold Project Water License Application, Larry Connell, Regional Manager of Environment, AEM
96. Letter to Richard Dwyer, Licensing Administrator, NWB dated November 26, 2007, received December 3, 2007, Re: 2AM-MEA – Meadowbank Gold Project Water License Application Supplementary Information on Sewage Treatment Plant, Larry Connell, Regional Manager of Environment, AEM
97. Letter to Richard Dwyer, Licensing Administrator, NWB dated November 26, 2007, received December 3, 2007, Re: 2AM-MEA – Meadowbank Gold Project Water License Application Supplementary Information on Explosive Storage Facilities, Larry Connell, Regional Manager of Environment, AEM
98. Letter to Richard Dwyer, Licensing Administrator, NWB dated November 26, 2007, received December 3, 2007, Re: 2AM-MEA – Meadowbank Gold

Project Water License Application Supplementary information on Ore Storage Facilities, Larry Connell, Regional Manager of Environment, AEM

99. Submitted December 3, 2007 by AEM titled Big John Operation Manual (Bio-disk Natural Purification of Wastewater)
100. Submitted December 3, 2007 by, AEM, Technical Memorandum Re: Accidents Malfunctions
101. Letter to Richard Dwyer, Licensing Administrator, NWB dated December 4, 2007, Re: 2AM-MEA – Meadowbank Gold Project Water License Application Supplementary Information, Larry Connell, Regional Manager of Environment, AEM.
102. Letter to Richard Dwyer, Licensing Administrator, NWB dated November 25, 2007, received December 4, 2007 Re: 2AM-MEA – Meadowbank Gold Project Water License Application, Eberhard Scherkus, President and Chief Operating Officer, Agnico-Eagle Mines Ltd.
103. Letter to Larry Connell, Regional Manager Environment, AEM dated December 10, 2007 Re: Agnico-Eagle Mines Ltd. – Meadowbank Project, Richard Dwyer, Licensing Administrator, NWB.
104. Letter to Larry Connell, Regional Manager Environment, AEM dated December 10, 2007 Re: Application for a Type “A” Water License, Dionne Filiatrault, Executive Director, NWB.
105. Submitted December 11, 2007 by AEM Type A Water License Application Documents.
106. Submitted December 11, 2007 by AEM, Revised 528 05 Dec\_07 Document List Rev 2, Concordance Table with Project Certificate (NIRB 2006) and Type-A Water License Guidelines (NWB 2007)
107. Submitted December 12, 2007 by AEM, Cumberland Resources Ltd. Meadowbank Gold Project, Project Alternatives Report (October 2005)
108. Letter to Richard Dwyer, Licensing Administrator, NWB dated November 23, 2007, received December 13, 2007, Re: 2AM- MEA – Meadowbank Gold Project Water License Application – Incorporation of Type B Water License 8BC-MEA0709 and Type B Water License 8BC-TEH0708 in the Type A Water License, Larry Connell, Regional Manager of Environment, AEM
109. Letter to Richard Dwyer, Licensing Administrator, NWB dated November 23, 2007, received December 13, 2007, Re: 2AM-MEA – Meadowbank Gold

Project Water License Application – Requirement under the NWB Guidelines for Submission of Documents Signed by Professionals

110. Letter to Dionne Filiatrault, Executive Director, NWB dated November 26, 2007, received December 13, 2007, Re: 2AM-MEA – Meadowbank Gold Project Water License Application, Larry Connell, Regional Manager of Environment, AEM.
111. Letter to Richard Dwyer, Licensing Administrator, NWB dated November 26, 2007, received December 13, 2007, Re: 2AM-MEA – Meadowbank Gold Project Water License Application Supplementary Information on Ore Storage Facilities, Larry Connell, Regional Manager of Environment, AEM.
112. Letter to Richard Dwyer, Licensing Administrator, NWB dated November 26, 2007, received December 13, 2007, Re: 2AM-MEA – Meadowbank Gold Project Water License Application Supplementary Information on Sewage Treatment Plant, Larry Connell, Regional Manager of Environment, AEM.
113. Letter to Richard Dwyer, Licensing Administrator, NWB dated November 26, 2007, received December 13, 2007, Re: 2AM-MEA – Meadowbank Gold Project Water License Application Supplementary Information on Explosives Storage Facilities, Larry Connell, Regional Manager of Environment, AEM.
114. Submitted December 13, 2007 by Luis Manzo, Director of Lands, Kivalliq Inuit Association Re: Report of Technical Review of the Type A Water License Application for Meadowbank Mining Corporation, Meadowbank Gold Project NWB Reference: 2AM-MEA.
115. Submitted December 18, 2007 by AEM, Technical Memorandum Meadowbank Gold Project 2007 Baseline Groundwater Quality (Document 548).
116. Letter to Richard Dwyer, Licensing Trainee, NWB dated December 20, 2007 Re: 2AM-MEA – Meadowbank Gold Project Water License Application Navigable Waterways Project Act Approval Applications to Transport Canada for the East Dike, Storm water Dike and TSF, Larry Connell, Regional Manager Environment, AEM.
117. Submitted December 20, 2007 by AEM, NWPA Application Form for East Dike.
118. Submitted December 20, 2007 by AEM, NWPA Application Form for Storm water Dike.
119. Letter to Greg Black, NWPP Officer, Navigable Waters Protection Program, Transport Canada, dated December 19, 2007 received December 20, 2007 Re:

- 8200-14-1: Meadowbank Gold Project Navigable Waterways Protection Act Approvals Dewatering Dikes – East Dike, Larry Connell, Regional Manager Environment, AEM.
120. Letter to Greg Black, NWPP Officer, Navigable Waters Protection Program, Transport Canada, dated December 19, 2007 received December 20, 2007 Re: 8200-14-1: Meadowbank Gold Project Navigable Waterways Project Act Approvals Tailings Storage Facility – Storm water Dike, Larry Connell, Regional Manager Environment, AEM.
  121. Submitted December 20, 2007 by AEM (Document 581) Incineration Waste Management Plan Meadowbank Gold Project.
  122. Submitted December 20, 2007 by AEM Bathymetric Surveys Meadowbank Project Nunavut.
  123. Letter to Richard Dwyer, Licensing Administrator, NWB dated December 20, 2007, received December 20, 2007, Re: 2AM-MEA – Meadowbank Gold Project Water License Application Navigable Waterways Protection Act Approval Applications to Transport Canada for the East Dike, Storm water Dike and TSF, Larry Connell, Regional Manager of Environment, AEM.
  124. Letter to Richard Dwyer, Licensing Administrator, NWB dated December 20, 2007, received January 3, 2008, Re: 2AM-MEA – Meadowbank Gold Project Water License Application Navigable Waterways Protection Act Approval Applications to Transport Canada for the East Dike, Storm water Dike and TSF, Larry Connell, Regional Manager of Environment, AEM.
  125. Letter to David Hohnstein, Acting Director Technical Services, NWB dated January 3, 2008 Re: Third-Party Review of Meadowbank Project, NU On Behalf of the NWB, James W. Cassie, Specialist Geotechnical Engineer, & Holger Hartmaier, Senior Geotechnical Engineer, BGC Engineering Inc.
  126. Letter to Meadowbank Project Distribution List dated January 15, 2008 Re: NWB Seeking to Obtain External Engineering Consulting Services from BGC Engineering, David Hohnstein, A/Director of Technical Services, NWB.
  127. Letter to James W. Cassie, Specialist Geotechnical Engineer, BGC Engineering Inc. dated January 16, 2008 Re: Third Party Review of Meadowbank Project, NU, David Hohnstein, A/Director Technical Services, NWB.
  128. Letter to Larry Connell, Regional Manager of Environment, AEM dated January 25, 2008 Re: Fisheries Act Authorization Amendment #1 – Meadowbank Gold Mine All Weather Private Access Road, Keith Pelly, A/Area Director, Fisheries and Oceans Canada.

129. Letter to News North, dated January 25, 2008, Re: Request to Place Ad for 2AM-MEA---- Meadowbank Project, Phyllis Beaulieu, Manager Licensing, NWB.
130. Letter to Meadowbank Distribution List, dated January 28, 2008 Re: Notice of Public Hearing 2AM-MEA---- Meadowbank Project, Phyllis Beaulieu, Manager Licensing, NWB.
131. Letter to Richard Dwyer, Licensing Administrator, NWB dated January 28, 2008, received January 30, 2008, Re: Meadowbank Gold Project Type A Water License Application – Inuktitut Translations of Executive Summaries, Larry Connell, Regional Manager of Environment, AEM
132. Submitted January 30, 2008 by AEM Inuktitut Summary of Final Report Detailed Design of Dewatering Dikes Meadowbank Gold Project Volume 1
133. Submitted January 30, 2008 by AEM Inuktitut Summary of Integrated Report on Evaluation of Tailings Management Alternatives Meadowbank Gold Project Nunavut.
134. Submitted January 30, 2008 by AEM Inuktitut Summary of Report on Conceptual Design of the Effluent Outfall Diffuser for Wally Lake
135. Submitted January 30, 2008 by AEM Inuktitut Summary of Final Report Detailed Design of Central Dike Meadowbank Gold Project Volume 1
136. Submitted January 30, 2008 by AEM Inuktitut Summary of Final Report on Pit Slope Design Criteria for the Portage and Goose Island Deposits Meadowbank Project, Nunavut Volume 1
137. Submitted January 30, 2008 by AEM Inuktitut Summary of Meadowbank Gold Project Hazardous Materials Management Plan
138. Submitted January 30, 2008 by AEM Inuktitut Summary of Final Report On Landfill Design and Management Plan Meadowbank Gold Project.
139. Submitted January 30, 2008 by AEM Inuktitut Summary of Meadowbank Gold Project Emergency Response Plan
140. Submitted January 30, 2008 by AEM Inuktitut Summary of Meadowbank Gold Project Spill Contingency Plan
141. Submitted January 30, 2008 by AEM Inuktitut Summary of Report Addendum Detailed Design of Dewatering Dikes Meadowbank Gold Project

142. Submitted January 30, 2008 by AEM Inuktitut Summary of Meadowbank Gold Project Mine Waste & Water Management
143. Submitted January 30, 2008 by AEM Inuktitut Summary of Report on Water Quality Predictions Meadowbank Gold Project Nunavut
144. Submitted January 30, 2008 by AEM Inuktitut Summary of Meadowbank Gold Project Preliminary Closure & Reclamation Plan
145. Pre-Hearing Agenda February 26 & 27 2008 distributed to Meadowbank Distribution List February 8, 2008, Richard Dwyer, Licensing Administrator, NWB.
146. Submitted February 13, 2008 by Helen Yeh, Environmental Assessment Coordinator, Government of Nunavut Department of Environment Re: Review of Meadowbank Mining Corp. Water License Application for the Meadowbank Gold Mine Project.
147. Submitted February 14, 2008 by INAC Meadowbank Type A Water License Application Reviews – Performed by INAC Internal & External Reviewers
148. E-mail to Richard Dwyer, Licensing Administrator, NWB dated February 15, 2008 Re: Meadowbank Project – Recording of Conference Call between the INAC Review Team and the AEM Team, Larry Connell Regional Manager, AEM.
149. Letter to Richard Dwyer, Licensing Administrator, NWB dated February 18, 2008 Re: 2AM-MEA – Meadowbank Gold Project Water License Application Document 511 – Preliminary Closure and Reclamation Plan Point of Clarification, Larry Connell, Regional Manager of Environment, AEM
150. Received February 18, 2008 by the Nunavut Water Board from Agnico-Eagle Ltd. e-mail minutes of meeting held February 14, 2008
151. Submitted February 18, 2008 by Amy Liu, Habitat Management Biologist, Fisheries and Oceans Canada Re: Technical Comments for the Nunavut Water Board Technical Meeting and Pre-Hearing Conference Type A Water License Application Meadowbank Gold Mine Project February 18, 2008.
152. Submitted February 18, 2008 by Jim Rogers, Manager Water Resources, Indian & Northern Affairs Canada Re: Completeness Evaluation and Comprehensive Technical Review Report Type A Water License Application Agnico-Eagle Mines Ltd. – Meadowbank Project Tehek Lake, NU February 18, 2008.



153. Submitted February 18, 2008 by Anne Wilson, Water Pollution Specialist, Environment Canada Re: Environment Canada's Technical Submission on the Meadowbank Project Water Licence Application – for the Pre-Hearing/Technical Meeting.
154. Submitted February 18, 2008 by Luis Manzo, Director of Lands, Kivalliq Inuit Association, Re: 2AM-MEA Agnico-Eagle Mines Limited – Meadowbank Gold Project Water License Application.
155. Letter to Richard Dwyer, Licensing Administrator, NWB, dated February 18, 2008, received February 19, 2008, Re: 2AM-MEA – Meadowbank Gold Project Water License Application Document 511 – Preliminary Closure & Reclamation Plan Point of Clarification Larry Connell, Regional Manager of Environment, Agnico-Eagle Mines Ltd.
156. Submitted February 21, 2008 by AEM Meadowbank Type A Licence Technical Review Intervener Comments Summary.
157. Submitted February 21, 2008 by Golder Associates minutes of meeting held February 15, 2008 1:00 to 2:00 pm Type A water licence review comments and discussion (Document 614)
158. Submitted February 21, 2008 by Kevin Biggar, Senior Geotechnical/Geo-environmental Engineer, BGC Engineering Inc. Re: Third Party Review of Meadowbank Project.
159. Submitted February 22, 2008 by Golder Associates minutes of meeting held February 19, 2008 2:00 – 3:30 pm Type A Water License Application Review Comments & Discussion
160. Submitted February 24, 2008 by AEM, Technical Review Intervener Comments Summary 1- AEM
161. Mail logged February 27, 2008 List of Pre-Hearing Commitments.
162. Submitted February 27, 2008 by AEM, Technical Memorandum Re: Meadowbank Gold Project 2007 Baseline Groundwater Quality dated December 12, 2007 (Document 548)
163. Submitted February 27, 2008 by AEM, Technical Memorandum Re: 2007 Till Core Material Investigation and Laboratory Testing, Meadowbank Gold Project dated January 25, 2008 (Document 538)
164. Submitted February 27, 2008 by AEM, Report On Bathymetric Surveys Meadowbank Project Nunavut (Rpt 309)

165. Submitted February 27, 2008 by AEM, Report On Incineration Waste Management Plan Meadowbank Gold Project (Document 581)
166. Submitted by February 29, 2008 by AEM PowerPoint Presentation titled Meadowbank Gold Project Water License Technical Meetings February 26-27, 2008. (Community Presentation & Intervener Presentation)
167. Letter to Meadowbank Distribution list dated March 5, 2008 Re: Pre-Hearing Conference for Agnico-Eagle Mines Ltd. Meadowbank Gold Project application for a Type A Water License, Dionne Filiatrault, Executive Director, NWB.
168. Letter to Stephanie Autut, Executive Director, NIRB dated January 30, 2008 received March 7, 2008 Re: NIRB Project Certificate No. 004 – Meadowbank Gold Project Modification – Location of Explosives Storage and Mixing Plan, Larry Connell, Regional Manager Environment, AEM
169. Submitted March 6, 2008 by AEM, Notice of AEM scheduled Community Meeting held March 13<sup>th</sup>, 2008.
170. Letter to Steve Drummond, Manager, Navigable Waters Protection Program, dated September 25, 2007 received March 7, 2008 Re: Meadowbank Project – Application under the Navigable Water Protection Act, Louis Grondin, Vice-President Environment, AEM.
171. Letter to Louise Grondin, Vice-President Environment, AEM, dated October 26, 2007 received March 7, 2008 Re: Navigable Waters Protection – Application for approval of the Meadowbank Project, Nunavut, Greg Black, NWPP Officer, Navigable Waters Protection Program, Transport Canada
172. Letter to Greg Black, NWPP Officer, Navigable Waters Protection Program, Transport Canada dated December 19, 2007 received March 7, 2008 Re: 8200-14-1: Meadowbank Gold Project Navigable Waterways Protection Act Approvals Dewatering Dikes – East Dike, Larry Connell, Regional Manager Environment, AEM
173. Letter to Greg Black, NWPP Officer, Navigable Waters Protection Program, Transport Canada dated December 19, 2007 received March 7, 2008 Re: 8200-14-1: Meadowbank Gold Project Navigable Waterways Protection Act Approvals Tailings Storage Facility – Storm water Dike, Larry Connell, Regional Manager Environment, AEM.
174. Letter to Richard Dwyer, Licensing Administrator, NWB, dated March 7, 2008 Re: Meadowbank Type A Water License – Response to Pre-Hearing Commitments, Rachel Lee Gould, Project Manager, AEM

175. Submitted March 7, 2008 by AEM, Technical Meeting Response Appendix A-N.
176. Submitted March 10, 2008 by AEM, Technical Memorandum Re: AWPARG Stream Crossing Monitoring Reconnaissance, 15 June 2007 dated June 16, 2007.
177. Submitted March 10, 2008 by AEM, Technical Memorandum Re: AWPARG Mitigation Update 19 June 2007, dated June 19, 2007.
178. Submitted (Hardcopy) March 10, 2008 by AEM, Cumberland Resources Ltd. Aquatic Ecosystem Report October 2005
179. Letter to Richard Dwyer, Licensing Administrator, NWB dated March 12, 2008 Re: Meadowbank Gold Project – Response to Pre-Hearing Conference Request, Rachel Lee Gould, Project Manager, AEM.
180. Submitted April 3, 2008 by AEM, Minutes of Meeting held March 25, 2008 1:00-3:00 pm Re: Meadowbank Gold Project Reclamation Cost Estimate.
181. Submitted April 7, 2008 by AEM, Minutes of DFO – AEM Workshop on Habitat Compensation held March 14, 2008.

**APPENDIX B – LIST OF EXHIBITS FILED AT THE PUBLIC HEARING APRIL 15 & 16, 2008.**

	DESCRIPTION	SUBMITTED BY
1.	Electronic - AEM Public Hearing Presentation_r <sup>3</sup> April 2008	Larry Connell
2.	Hard Copy - AEM Public Hearing Meadowbank Gold Mine Project, April 2008	Larry Connell
3.	Electronic - Meadowbank Gold Project Incinerator Equipment Specifications Identification Number MDV/S/M/268 (Draft)	Larry Connell
4.	Electronic – INAC MG Water Licence Presentation Meadowbank Gold Project, April 2008	Michael Nadler
5.	Hard Copy - Indian and Northern Affairs Presentation Meadowbank Gold Project, April 2008	Michael Nadler
6.	Electronic – AEM Public Community Presentation_r <sup>3</sup> April 2008	Larry Connell
7.	Hard Copy – AEM Community Presentation Meadowbank Gold Mine Project, April 2008	Larry Connell
8.	Hard Copy – INAC Review by Brodie Consulting Ltd. on Meadowbank Reclamation Cost Estimate, Meadowbank Gold Project, Nunavut April 2, 2008 Doc # 646 Ver. B	Larry Connell
9.	Electronic – INAC Review by Brodie Consulting Ltd. on Meadowbank Reclamation Cost Estimate, Meadowbank Gold Project, Nunavut April 2, 2008 Doc # 646 Ver. B	Larry Connell
10.	Electronic – Environment Canada’s Intervention on the Meadowbank Gold Project, April 2008	Anne Wilson
11.	Hard Copy – Environment Canada’s Intervention on the Meadowbank Gold Project, April 2008	Anne Wilson
12.	Electronic – DFO Intervention Comments to the Nunavut Water Board on the Meadowbank Gold Mine Project, April 2008	Amy Liu
13.	Hard Copy – DFO Intervention Comments to the Nunavut Water Board on the Meadowbank Gold Mine Project, April 2008	Amy Liu
14.	Electronic – GN-DOE Review of Meadowbank Water License Application: Presentation to NWB, April 2008	Helen Yeh

	DESCRIPTION	SUBMITTED BY
15.	Hard Copy – GN-DOE Review of Meadowbank Water License Application: Presentation to NWB, April 2008	Helen Yeh
16.	Hard Copy – AEM Type A Water License Schedule of Plan Revisions	Larry Connell
17.	Electronic – AEM Type A Water License Schedule of Plan Revisions	Larry Connell
18.	Hard Copy – AEM Type A Water License Commitment Summary	Larry Connell
19.	Electronic – AEM Type A Water License Commitment Summary	Larry Connell
20.	Electronic – NTI and KIA, Nunavut Water Board Technical Hearing Presentation, April 2008	Steve Hartman
21.	Hard Copy – NTI and KIA, Nunavut Water Board Technical Hearing Presentation, April 2008	Steve Hartman

**APPENDIX C –**

**REASONS FOR DECISION  
FOR TYPE B WATER LICENCE 8BC-TEH0809  
ALL WEATHER PRIVATE ACCESS ROAD**

## DECISION

### LICENCE NUMBER: 8BC-TEH0809

This is the decision of the Nunavut Water Board (NWB) with respect to an application for a renewal and amendment of a Water Licence, dated March 5, 2008 made by:

#### **AGNICO-EAGLE MINES LIMITED**

to allow for water crossings, the use of water and disposal of waste during the following activities:

- completion of road construction, culvert installations, and routine operation activities along the All Weather Private Access Road (AWPAR) between the Hamlet of Baker Lake and the Meadowbank Gold Project Site;
- construction and operation of a camp designed for 340 persons at the Meadowbank Project site;
- installation of a Bulk Fuel Storage Facility;
- set up and operation of a sewage treatment plant at the Meadowbank Project site;
- set up and operation of a batch concrete plant at the Meadowbank Project Site; and
- pre-development of two on-land starter pits including access roads.

The Meadowbank Project site located approximately 70 km north of the Hamlet of Baker Lake within the Kivalliq Region, Nunavut and accessible via the All Weather Private Access Road at the general latitude 65° 1' 52" N and general longitude 96° 9' 22" W.

### **DECISION**

After having been satisfied that the application was in conformity with the Keewatin Land Use Plan and having undergone a Review by the Nunavut Impact Review Board in accordance with Article 12 Part 5 of the *Nunavut Land Claims Agreement* (NLCA)<sup>1</sup>, NWB decided that the application could proceed through the regulatory process. In accordance with S.55.1 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSTRA) and Article 13 of the NLCA, public notice of the application was given and interested persons were invited to make representations to the NWB. After reviewing the submission of the Applicant and considering the representations made by interested persons the NWB, having given due regard to the facts and circumstances, the merits of the submissions made to it and to the purpose, scope and intent of the NLCA and of the NWNSTRA, waived the requirement to hold a public hearing, and determined that:

**Licence Number 8BC-TEH0809 be issued subject to the terms and conditions contained therein.**

SIGNED this 28<sup>th</sup> day of May, 2008 at Qikiqtarjuaq, NU.

*ORIGINAL SIGNED BY:*

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Lootie Toomasie  
Board Director  
LT/kt

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<sup>1</sup> Meadowbank Gold Mine Project Certificate, Nunavut Impact Review Board, December 30, 2006

## **1. BACKGROUND AND PROCEDURAL HISTORY**

The NWB issued a construction water licence to Cumberland Resources Limited on February 20, 2007 to allow for the construction of a 115 kilometer all-weather access road and associated water crossings between the Hamlet of Baker Lake and the Meadowbank Gold Project site. The construction water licence expired on February 8, 2008.

On July 19 2007, the NWB was informed by AEM that Cumberland Resources Limited would become a wholly owned subsidiary of Agnico-Eagle Mines Ltd. (AEM). On August 1, 2007, AEM amalgamated with Cumberland Resources and Meadowbank Mining Corporation (a wholly owned subsidiary of Cumberland) and as a result of this amalgamation, all of the rights, title, liabilities and obligations of Cumberland Resources Limited and Meadowbank Mining Corporation were transferred and assumed by AEM.

Agnico-Eagle Mines Limited (AEM) submitted an application for water licence renewal and amendment to the NWB dated March 4, 2008. Following a preliminary review of the application, the NWB concluded that the application met the requirements of Section 48(1) of the *Nunavut Waters and Surface Rights Tribunal Act* (the Act) and advised the Applicant and distribution list accordingly on March 20<sup>th</sup>, 2008.

Information contained in the March 4, 2008 submission and distributed for review was as follows:

- Application cover letter;
- NWB Water Licence Application Form for the Meadowbank Gold Project Tehek Lake Access Road;
- NWB Supplementary Questionnaire for the Renewal/Amendment Application for the Meadowbank Gold Project Tehek Lake Access Road;
- Pre-development Closure and Reclamation Plan for the Meadowbank Project Site;
- Pre-development Camp and Sewage Treatment Plant Description for the Meadowbank Project Site;
- Pre-development Batch Concrete Plant Description;
- Waste and Water Management Plan for Mine Pre-Development Work Spring 2008;
- Spill Contingency Plan Meadowbank Project; and
- The Inuktitut translation of the summary of renewal and amendment application for the Meadowbank Gold Project Access Road Type B Water Licence.

The scope of the renewal and amendment application included the following:

- Completion of road construction, culvert installations, and routine operation activities along the all weather private access road between the Hamlet of Baker Lake and the Meadowbank Gold Project Site;
- Construction and operation of a camp at the Meadowbank Project site;



- Set up and operation of a sewage treatment plant at the Meadowbank Project site;
- Set up and operation of a batch concrete plant at the Meadowbank Project Site; and
- Pre-development of two on-land starter pits,

The Nunavut Water Board publicly posted notice of this application, in accordance with Section 55.1 of the Act and Article 13 of the *Nunavut Land Claims Agreement* (NLCA), on March 20th, 2008. The assessment process included the referral of the application to a variety of Federal, Territorial and local organizations for their review and comment.

As no public concern was expressed, the NWB waived the requirement to hold a public hearing and proceeded with the application process.

On or prior to April 22, 2008, the NWB received written representations on the application from interested parties including the Government of Nunavut Department of Environment (GN-DoE), Indian and Northern Affairs Canada (INAC), Environment Canada (EC), and Fisheries and Oceans Canada (DFO). In general, representations included comments and recommendations regarding the relationship between this Type B Water Licence, 8BC-TEH0809, the Type B exploration Water Licence 2BE-MEA0813 and the Type A Water Licence application for the Meadowbank Gold Project, waste and water management, spill contingency planning, abandonment and restoration, and fish habitat compensation. On April 25, 2008 AEM responded to the comments from each party.

## **2. ISSUES**

### **Term of Licence**

In accordance with Section 45 of the Act, the NWB may issue a licence for a term not exceeding twenty-five years. AEM, in their application, has requested a term of four and a half months (March 15, 2008 to August 1, 2008). In review of the comments received from interested parties INAC recommended that the term of the Licence be extended for one year.

Having considered the application and comments, and considering the application as a stand-alone project, the NWB has decided on a one (1) year term for the renewed and amended Licence. The decision for a longer duration than requested is based on the date of application submission and to provide the Licensee with sufficient time to complete the proposed undertakings and provide the associated plans.

### **Bulk Fuel Storage Tank**

Under Water Licence 2BE-MEA0507, Cumberland Resources Limited was authorized to construct a 5.6 million litre Bulk Fuel Storage Tank. According to AEM's 2007 annual

report, while some initial site preparation has been completed, this facility has not yet been constructed. However, AEM intends to construct this bulk fuel storage tank in 2008 in accordance with the detailed designs that were previously submitted to the NWB and in compliance with the terms and conditions of the exploration Licence 2BE-MEA0813.

It is important to note that the Bulk Fuel Storage Facility is a proposed component of the Type A Water Licence Application for the Meadowbank Gold Project currently under review by the Board. This Type B Water Licence has been amended to include conditions from the exploration Licence relating to the construction and operation of the Bulk Fuel Storage Facility (Part E Items 8, 9 and 10 of 2BE-MEA0813), discharge from the Facility (Part D Items 8 and 9 of 2BE-MEA0813) and monitoring of the Facility (Part J Items 4 and 5 of 2BE-MEA0813).

**Compliance with Canadian Council of Ministers of Environment (CCME) and Canada Wide Standards (CWS) for dioxin and furan emissions and mercury emissions**

The NWB notes that the Nunavut Impact Review Board's (NIRB) Final Hearing report for the Meadowbank Gold Mine Project Application dated August 2006 requires the following as stated in condition #72:

“On-site incinerators shall comply with CCME and CWS standards for dioxins and furan emissions and CWS for mercury emissions, and Cumberland shall conduct annual stack testing to demonstrate that the on-site incinerators are operating in compliance with these standards. The results of stack testing shall be contained in an annual monitoring report submitted to GN, EC and NIRB's monitoring office.”

The NWB acknowledges the GN's comments related to this issue as well as AEM's clarification to the GN regarding its commitment to adopt the guidelines for incinerator operations for the Meadowbank Gold Mine Project.

In the meantime, under Part D, conditions 5 and 6, the NWB authorizes the Licensee to incinerate all combustible, non-hazardous waste including food waste, paper waste and untreated wood products and sludge from the sewage treatment plant. Furthermore, the Licensee is required to backhaul and dispose of all non-combustible waste in an approved waste disposal site.

The Board also notes AEM's own advice in response to the GN's comments that dioxin, furan and mercury emissions are best controlled by keeping sources of these compounds out of the stream of waste to be incinerated.

**Operational ARD/ML Sampling and Testing Plan**

The NWB notes AEM's plan to construct roads and prepare the Meadowbank Project site to allow for planned dike construction under the Type A application. According to

AEM's *Waste and Water Management Plan for Mine Pre-development Work Spring 2008*, AEM proposes to temporarily leave blasted rock in the pit<sup>2</sup>. AEM indicated that till and rock may be required from the pre-development pits for use in construction of the roads and possibly other site infrastructure<sup>3</sup>.

EC raised issues regarding rock management that are relevant to the use of till and rock proposed under this Type B water licence renewal/amendment. Firstly, given that a large proportion of till is proposed for use in construction of roadways, and environmental structures, EC indicated the importance of ensuring that this till not be problematic with respect to acid generation or metal leaching and recommended that testing, committed to by AEM, be reported to the Board annually<sup>4</sup>. Secondly, EC recommended that a credible system of segregating mine rock should be in place prior to excavation, and that conservative measures and criteria should be employed where there is uncertainty as to the character of the excavated material. Furthermore, EC recommended that the segregation system should be audited periodically to ensure that it is operating effectively<sup>5</sup>.

The GN raised the issue of metal leaching and the need to establish correlations between total metal concentrations and metal leach rates to which AEM committed to a specific sampling and analytical program<sup>6</sup>. The GN recommended that the requirement to conduct and report on the re-evaluations committed to by AEM be included in the water licence.<sup>7</sup>

Considering the potential for problematic material to be incorporated into environmentally sensitive structures planned for construction during pre-development, the NWB agrees with EC and GN. Therefore, the Board is requiring the Licensee, under Part I Item 1 to submit within thirty (30) days of licence issuance, a revised Operational ARD/ML Sampling and Testing Plan.

### **Sewage Treatment Plant**

AEM plans to discharge treated effluent from the Sewage Treatment Plant to the Stormwater Management Pond where overflow will be directed to the northwest arm of Second Portage Lake. Recognizing that Sewage Treatment Plant effluent will not be directly discharged to the environment, the NWB has incorporated nutrient parameters and concentrations proposed by AEM into the effluent quality criteria required for discharges from the Stormwater Management Pond.

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<sup>2</sup> Mine Waste and Water Management Plan for Mine Pre-Development Work Spring 2008, Agnico-Eagle, Meadowbank Project, Section 3.3, pg 8

<sup>3</sup> Mine Waste and Water Management Plan for Mine Pre-Development Work Spring 2008, Agnico-Eagle, Meadowbank Project, Section 3.1, pg 6

<sup>4</sup> Environment Canada's Intervention respecting the Agnico-Eagle Mines Ltd. Water Licence Application for the Meadowbank Gold Project, March 31, 2008, Section 4.3, pg 15

<sup>5</sup> Environment Canada's Intervention respecting the Agnico-Eagle Mines Ltd. Water Licence Application for the Meadowbank Gold Project, March 31, 2008, Section 4.4, pg 16

<sup>6</sup> Agnico Eagle Mines Ltd. Response to Meadowbank Type A Water Licence Intervenor Comments dated March 7, 2008 Table 2a, pg 2

<sup>7</sup> Government of Nunavut Department of Environment's Intervention respecting the Agnico-Eagle Mines Ltd. Water Licence Application for the Meadowbank Gold Project, March 31, 2008, Section 10, Issue 9, pg 14.

In addition, under Part D Item 10, the Board is requiring the Licensee to submit an Operations and Maintenance Manual for the Sewage Treatment Plant that discusses contingency measures in case of Sewage Treatment Plant malfunction.

### **Water Quality and Effluent Discharges**

Amendment to the project activities that allow for pre-development, will result in effluent discharges to the receiving environment from the Contact Water Collection System and the Stormwater Management Pond.

The Board notes the GN's comments and recommendations regarding effluent discharge limits from Lakes #1 and #2 of the Contact Water Collection System and accepts AEM's response and commitment that any water discharged from Lakes#1 and #2 into Second Portage Lake will meet MMER standards.

To protect water quality in the receiving environment, the NWB requires the Licensee to ensure that effluent directed to Second Portage Lake meets effluent quality criteria set out in Part D Items 13 and 15. The Board has set these criteria based on AEM's plan to meet MMER standards at the point of discharge from the Contact Water Collection System as well as AEM's plans for the operation of the Tear Drop Lake as a Stormwater Management Pond where treated sewage from the Sewage Treatment Plant will be pumped and where discharge from the Bulk Fuel Storage Facility may be directed.

In addition, the Board notes that plans regarding the method of effluent discharge from the Contact Water Collection System and the Stormwater Management Pond have not been described, nor have the potential impacts, if any, to the receiving environment. Recognizing that the method of discharge could alter the potential impacts to the receiving environment, the Board is requiring the Licensee to provide a description of its proposed discharge methods and associated effects in its revised Waste and Water Management Plan.

### **Waste and Water Management Plan**

In accordance with Part B Item 3 of Water Licence 8BC-TEH0708, Cumberland Resources Limited (CRL) submitted a Site Water Management Plan in the form of a technical memorandum regarding Water Management and Monitoring Plan for Type "B" Water Licence Number 8BC-TEH0708, Meadowbank Gold Project Access Road, Kivalliq Region, Nunavut, dated March 21, 2007. On June 6<sup>th</sup>, 2007, the NWB distributed this document and invited interested persons to comment within thirty (30) days. On July 6<sup>th</sup>, 2007 comments on the document were received from INAC.

In addition, as part of the Water Licence renewal and amendment application, AEM submitted a Waste and Water Management Plan for Mine Pre-Development Work. In reviewing this plan, the Board found that it lacks detail with respect to waste and water management plans for work authorized under the original licence 8BC-TEH0708.

Furthermore, the Board found an inconsistency in the Waste and Water Management Plan regarding the use of blasted rock from the pre-development starter pits in construction. It is not clear whether blasted rock will be left in place in the pre-development zones to minimize the effects on the environment or incorporated into access roads.

Despite the above deficiencies, the Board has approved the Waste and Water Management Plan. In doing so, it requires the Licensee under Part D Item 1 to submit a revised plan within thirty (30) days of licence issuance that incorporates waste and water management concepts from previously submitted plans and takes into account the comments submitted by INAC on July 6<sup>th</sup>, 2007. Furthermore, prior to commencing any activities under this Licence, the Licensee is required to provide clarification to the Board regarding the use of blasted rock and this clarification shall be incorporated into any revised Waste and Water Management Plan in accordance with Part D Item 2.

### **Spill Contingency Plan**

Under Part G Item 1 the Board has approved of AEM's Spill Contingency Plan. However, given that the Bulk Fuel Storage Facility is to be included as a component of this Licence and that the All Weather Private Access Road will be used to supply the site with fuel and other supplies, the Board also requires that the Licensee submit an Addendum to the plan specifically addressing how potential spills along the road and spills associated with the Bulk Fuel Storage Facility will be handled.

### **Abandonment and Restoration Plan**

The Board acknowledges AEM's submission of its Pre-Development Closure and Reclamation Plan for the Meadowbank Project Site as part of its Water Licence renewal and amendment application.

In review of parties' comments and AEM's response regarding the Pre-Development Closure and Reclamation Plan, the Board notes INAC's recommendation that the plan should be resubmitted within sixty days of licence issuance to include plans for temporary closure and overlaps with the existing amended Type B exploration water licence 2BE-MEA0813. The Board also acknowledges AEM's concession to INAC's recommendation in its April 25<sup>th</sup>, 2007 response with a preference for a ninety day (90) time period for submission.

The Board notes the GN's comments concerning plans to restore water quality in Lakes #1 and #2 of the Contact Water Collection System as well as AEM's response to ensure that water quality will be returned to standards protective of the environment as developed through a risk based assessment.

The NWB accepts AEM's recommendation for a ninety (90) day time period to submit the plan and requires under Part H Item 1 that the revised plan address both INAC's and GN's comments.

### **Monitoring Plan**

In accordance with Part I Item 1 of Water Licence 2BC-TEH0708, CRL submitted a Monitoring Plan in the form of a technical memorandum regarding Water Management and Monitoring Plan for Type "B" Water Licence Number 8BC-TEH0708, Meadowbank Gold Project Access Road, Kivalliq Region, Nunavut, dated March 21, 2007. On June 6<sup>th</sup>, 2007, the NWB distributed this document and invited interested persons to comment within thirty (30) days. On July 6<sup>th</sup>, 2007 comments on the document were received from INAC.

In the INAC Inspection Report dated September 27, 2007, the Inspector noted the question of the plan's completeness based on INAC's July 6<sup>th</sup>, 2007 comments as well as the status of plan approval from the NWB. To date, the NWB has not approved the Monitoring Plan.

To tie together and update monitoring details for the original licence and the renewal/amendment, the Board requires the Licensee under Part I Item 2 to submit a stand alone Monitoring Plan that incorporates details presented in previously submitted documents as well as the comments submitted by INAC.

### **Other**

It is important to note that the use of the above information referenced from the Type A water licence proceeding was the subject of a letter dated May 20, 2008 from the Nunavut Water Board to interested Parties from which the Board received no objections.

**APPENDIX D -**

**REASONS FOR DECISION  
FOR TYPE B WATER LICENCE 8BC-MEA0709  
BAKER LAKE MARSHALLING FACILITY**

## **DECISION**

### **LICENCE NUMBER: 8BC-MEA0709**

This is the decision of the Nunavut Water Board (NWB) with respect to an application for the renewal a Licence dated April 8, 2007 made by

#### **AGNICO-EAGLE MINES LTD.**

to allow for the construction of the Baker Lake facilities related to the Meadowbank Project, which shall include the following: barge unloading facilities; a lay-down, storage and marshalling area; a fuel tank farm; and associated access roads.

These facilities shall be located within the Hamlet of Baker Lake, Kivalliq Region, Nunavut (located at the general latitude of 64°20'N and general longitude 96°10' W).

## **DECISION**

After having been satisfied that the application was in conformity with the applicable Land Use Plan and following the review of the proposed undertaking by the Nunavut Impact Review Board (Project Certificate No. 004, dated December 30, 2006), in accordance with the *Nunavut Land Claim Agreement* (NLCA), the NWB decided that the application could proceed through the regulatory process. In accordance with S.55.1 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSRTA) and Article 13 of the *NLCA*, public notice of the application was given and interested persons were invited to make representations to the NWB.

After reviewing the submission of the Applicant and representations made by interested persons, the NWB, having given due regard to the facts and circumstances, the merits of the submissions made to it and to the purpose, scope and intent of the *NLCA* and of the *NWNSRTA*, decided to waive the requirement to hold a public hearing and determined that:

**Licence Number 8BC-MEA0709 be issued subject to the terms and conditions contained therein. (Motion #: 2007-08-11)**

SIGNED this 12<sup>th</sup> day of August 2007 at Gjoa Haven, NU.

*Original signed by:*

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Thomas Kabloona  
A/Chief Executive Officer



## **INTRODUCTION**

The Applicant has indicated that supplies for construction and operations at the Meadowbank Project site will be consolidated in Baker Lake before being moved to the site over the all season road. The marshalling facility will receive supplies during the shipping season from late July until early October. The supplies will then be consolidated, sorted and transported to the site.

The proposed facilities at Baker Lake, located about 2 km east of the community, will consist of a barge unloading ramp with an adjacent storage and marshalling area, a fuel storage facility, a storage compound for explosives (all explosives will be stored in approved magazines) and interconnecting roads. A total storage area of approximately 104,000 m<sup>2</sup> will be provided by this facility, near the community of Baker Lake. The entire facility will be fenced and include an office trailer.

The Applicant has indicated that the site for the proposed lay-down area slopes up at about a 10% grade from the lake shore. Additionally, the Applicant has conducted an investigation of the proposed site and determined that the area is underlain by granular marine (beach) deposits which appear to be suitable for site grading and at-grade support of surface structures, with minimal treatment, provided that the thickness of these soils is greater than the annual thaw depth (2 m) and that adequate site drainage is implemented. The main marshalling area is located at least 200 metres from the lakeshore on marine deposits. The fuel tanks are located higher up the slope in an area of identified bedrock. The explosives storage compound is located still farther up the slope, at a distance as required by explosive storage regulations. A separate area will be lined with an HDPE liner for the storage of Ammonium Nitrate (AN). This storage area will encompass approximately 6,600 m<sup>2</sup>, and will be located on the northwest side of the lay-down area. The general lay-down area will cover approximately 65,000 m<sup>2</sup>. A detailed geotechnical report for the proposed lay-down and fuel storage site has been produced by Golder Associates Ltd and provided to the NWB.

The benches and roads for the lay-down area will be constructed utilizing a cut and fill process. Site roads will be constructed at an 8% gradient and the storage platforms will be sloped slightly to direct any run-off to the collection ditches. In the main traffic areas, the roads and the unloading platform will be covered in 1m of compacted granular fill. The storage platforms will be surfaced with 0.6m of compacted granular fill to provide stable support for the supplies. The benches and roads will be ditched to control run-off. The contact run-off will be directed to an impervious sedimentation pond adjacent to the unloading platform. The Applicant has indicated that water in the pond will be monitored prior to discharge to the environment. A comprehensive (Draft) Water Use and Water Management Plan has been produced by Golder Associates Ltd. for the Baker Lake facility, and provided to the NWB.

The Applicant has indicated that the proposed fuel storage area will be located adjacent to the marshalling area, at a distance greater than 200 metres from the shore of Baker Lake. The tanks will be field-erected steel tanks built to API-650 standards and located within a lined and bermed containment area, capable of containing 110% of the total volume of

the tanks. The facility is designed to be expanded to eventually contain four 10ML fuel tanks. The two 10 ML fuel tanks scheduled for completion this year will be erected prior to the end of the 2007 shipping season, to allow the tanks to be filled with arctic grade diesel fuel to meet the fuel needs for continued construction at the Meadowbank Project site over the winter.

The barges transporting diesel fuel to Baker Lake will be equipped with onboard transfer pumps to transfer fuel through a 200 mm hose connection to the storage tanks. A fuel pump module will be installed adjacent to the fuel storage tanks. The module will have high and low volume dispensing pumps to allow re-fuelling of highway vehicles, and the filling tanker trucks which will be used to haul fuel to site. The module will be housed in an arctic container installed on a lined and compacted gravel pad. The pump module will be provided with a spill collection sump and pumpout facilities.

The fuel storage facility will be contained within a lined and bermed area, complete with the following:

- A granular base for the tank complete with a 60 mil HDPE liner system and granular dikes to suit the 2 - 10ML tanks
- Two 10ML tanks complete with the required appurtenances
- Piping for unloading and loading
- Site lighting via fixtures mounted from the dispensing building
- One Re-supply/Dispenser Building for loading the fuel Trailer /Truck and other vehicles.
- A fuel dispensing pad area complete with a dispensing unit will be in a lined facility with a provision to capture any and all spills at the fueling area and direct it to the main containment area provided for the 2 - 10ML tanks.

## **II. PROCEDURAL HISTORY**

On April 8, 2007, an Application for a Water Licence was filed with the Nunavut Water Board by Agnico-Eagle Mines Ltd., to allow for the construction of the Baker Lake Facilities related to the Meadowbank Project, which include the following: barge unloading facilities, a lay-down, storage and marshalling area, ammonium nitrate and explosive storage areas, a fuel tank farm and associated access roads. These facilities are to be located approximately two kilometers east of the community of Baker Lake, Kivalliq Region, Nunavut (located at the general latitude of 64°20'N and general longitude 96°10' W). An approval for an industrial subdivision at the proposed site was received from the Government of Nunavut, Department of Community and Government Services on August 24, 2006.

The Application was distributed to interested persons for review on June 29, 2007. Comments regarding the Application were received from the Government of Nunavut-Department of Environment, Environment Canada and Indian and Northern Affairs Canada prior to the July 29, 2007 deadline. The Licensee is directed to the written

submissions received during the public review period for this Application for renewal, which can be found on the NWB ftp site at the following url: [http://nunavutwaterboard.org/ftp/8BC-CONSTRUCTION/8BC-MEA/Comments and Intervenors](http://nunavutwaterboard.org/ftp/8BC-CONSTRUCTION/8BC-MEA/Comments_and_Intervenors)

In addition, the NWB recommends that the Licensee confirm with the Department of Fisheries and Oceans (DFO) the regulatory requirements related to any harmful alteration, disruption, or destruction of fish habitat (HADD) issues which may exist with the barge landing area.

The Licensee is also reminded that compliance with the terms and conditions of this Licence does not absolve the Licensee from the responsibility for compliance with the requirements of all other applicable Federal, Territorial and Municipal legislation.

### **III. GENERAL CONSIDERATIONS**

#### **A. Term of the Licence**

In accordance with the Nunavut Waters and Nunavut Surface Rights Tribunal Act S. 45, the NWB may issue a licence for a term not exceeding twenty-five years. Although the Application had indicated an approximate completion date of 2019, the NWB noted in a letter issued by Agnico Eagle Mines Ltd. on August 2, 2007 in response to the comments received from interested parties, a commitment to agree to the amalgamation of Type “B” Licenses with the Meadowbank Project Type “A” Licence when issued. The NWB believes that a term of approximately two (2) years is appropriate and satisfies the short term needs of the Licence in view of the long term goals. The licence term will allow the Licensee to properly carry out the terms and conditions of the licence, to the satisfaction of the NWB.

#### **B. General Conditions**

##### **Annual Report**

The requirements imposed on the Licensee in this licence are for the purpose of ensuring that the NWB has an accurate annual update of water use and depositions of waste during a calendar year. This information is maintained on the public registry and is available to any interested persons upon request. The requirements of this Annual Report can be found in Part B, Item 1. A standard form for the annual reporting can be downloaded from the NWB ftp site at <http://nunavutwaterboard.org/ftp/> in the administration folder.

##### **Security**

With respect to security, under the NWNSRTA, Section 76(1), *“the Board may require an applicant, a Licensee or a prospective assignee to furnish and maintain security with the Minister in the form, of the nature, subject to such terms and conditions and in an amount prescribed by, or determined in accordance with, the regulations or that is satisfactory to*

*the Minister.*” Due to the proximity of the facilities being constructed to the freshwater resource of Baker Lake and the nature of the appurtenant undertaking, the NWB has imposed upon the Licensee, the requirement to assess the full cost of reclamation and closure to be considered by the Board for the posting of security.

An initial closure cost estimate was prepared by Golder Associates for Agnico-Eagle Mines Limited, in the form of a technical memorandum, on the Baker Lake Facilities for the Meadowbank Gold Project. This memorandum, dated July 12, 2007 was not included in the initial distribution information and as such, was not considered, or noted by the parties that provided comments. As this cost estimate provided a “summary of costs” in a very general format, the NWB has included within the conditions of the Licence, the requirement to provide a detailed assessment of restoration liability following 2007 construction. This estimate will be reviewed and a decision on the requirement for provision of security will be formally provided to the Licensee to then comply with Part B, Item 4.

### **C. Water Use**

The Licensee has stated that water use will not be required during the term of this Licence as potable water for personal use will be obtained from the Hamlet of Baker Lake.

### **D. Deposit of Waste**

#### **Sewage**

The Licensee has stated that sewage disposal will not be required during the term of this Licence, as sewage, if any, generated during construction/monitoring activities will be directed to the Sewage Disposal Facility operated by the Hamlet of Baker Lake.

#### **Solid Waste**

The Licensee has stated that solid waste disposal will not be required during the term of this Licence, as solid waste generated during the appurtenant undertaking will be directed to the Solid Waste Disposal Facility operated by the Hamlet of Baker Lake.

### **Contact Water Collection Ponds**

The Licensee has indicated there will be two Contact Water Collection Ponds constructed at either end of the Dry Freight Storage Area as provided in the design drawings submitted with the Application. These ponds have been designed with an intended direct discharge to Baker Lake. The constructed facility will be within close proximity to the Hamlet of Baker Lake and the Water Supply Facilities for the Hamlet. As such, the NWB has imposed effluent quality requirements or standards for discharges from the Collection Ponds that are consistent with the Environmental Guidelines for Industrial Waste Discharges, 2004, Government of Nunavut, Department of Environment and

where less stringent, imposed those recommended for the discharge of mine wastes under the Metal Mines Effluent Regulations, developed under the Fisheries Act. Where otherwise not addressed by either source, the Canadian Council of Ministers of the Environment (CCME) water quality guidelines for the protection of aquatic life have been consulted and used where appropriate. These effluent standards are presented in the table under Part D, Item 4.

Part A, Item 1(ii) of this Licence emphasizes the requirement of the Licensee to be aware of appropriate legislation that may affect the operation of the facility and, especially, any discharges that may be considered.

#### **E. Undertaking**

General conditions apply.

#### **F. Infrastructures and Operations**

##### **Site Water Management Plan**

A “Draft Report on Water Use and Management Plan, Baker Lake Marshalling Area, Meadowbank Gold Project”, Golder Associates, March 2007 was received by the NWB with the Licence Application . This Plan was reviewed with the application documents and the NWB received comments on the prepared Plan. As this Plan was provided as a draft and considerable changes may be required upon completion of the construction for the project, the NWB has included a requirement under Part F, Item 1 for the re-submission of a final, revised Plan to take into account any changes to the project and comments received during the review period.

##### **Operations and Maintenance Plan**

The proposed facilities to be operated by the Licensee require a considerable understanding of the location, environment and the materials handling requirements of all products to be accepted at the Marshalling facilities. The Licensee has acknowledged that fact and committed to providing the appropriate Plans in a response letter dated August 2, 2007. Part F, Item 2 requires the submission of a site Operations and Maintenance Plan to address all aspects of the continued operation of the facility

#### **G. Modifications**

General conditions apply.

#### **H. Spill Contingency Planning**

As required by S. 6 (2)(g) of the Regulation, where the undertaking involves the handling or storage of petroleum products or hazardous materials, the Board may require an applicant to file a plan for the safe handling, storage and disposal thereof, and a contingency plan for their containment and for the clean-up thereof in the even of a spill.

The Board generally requires that all Licensees prepare a comprehensive Spill Contingency Plan to establish a state of readiness to ensure a prompt and effective response to possible spills or system failure events.

The site-specific spill contingency plan will assist the Licensee in responding to emergencies such that the impacts to water in particular and the environment and public health in general are minimized. The Licence contains a requirement that a Spill Contingency Plan be developed within sixty (60) days of the issuance of this Licence, which shall address comments received by the Parties during the NWB review process.

#### **I. Abandonment and Restoration (A&R) Planning**

To ensure that all facilities associated with this Undertaking are reclaimed in an appropriate manner upon abandonment, the NWB requires the Licensee to submit to the NWB within ninety (90) days of the issuance of this Licence, an assessment of current restoration liability using the most recent version of RECLAIM or other equivalent method as approved by the Board.

Additionally, the Licensee shall furnish and maintain security with the Minister, as required by the Board, in a form and amount acceptable to the Minister. The security deposit shall be maintained until such time as the Minister is satisfied that the Licensee has complied with all provisions of an approved Abandonment and Restoration Plan. This clause shall survive the expiry of this Licence or renewals thereof.

#### **J. Monitoring**

The NWB has imposed monitoring requirements for all wastes to be discharged from the facilities and has detailed these requirements under Part J. In addition to the monitoring for water quality and quantity, the NWB has included a requirement to provide a monitoring plan for the geotechnical integrity of the Bulk Fuel Storage Facility as detailed under Part J, Item 10. This monitoring plan is to include a geotechnical assessment of the facility on an annual basis with the results of the monitoring plan to be included within the Annual Report.