



## **A. *Procedural History***

On March 31, 2003, Cumberland Resources Ltd. (the “Proponent”) submitted a Project Description to NIRB for the proposed Meadowbank Gold Project (the “Project”).<sup>3</sup> NIRB acknowledged receipt of the Project Description in a letter dated April 22, 2003, and advised the Proponent that the document had been forwarded to the Nunavut Planning Commission (“NPC”) for a land use plan conformity review.<sup>4</sup>

Following the completion of the NPC review, the Proponent wrote to the Board and requested that NIRB divide the Project application into two standalone components so that the proposed diesel fuel tank farm to be located at Baker Lake, could be screened separately. The reason given by the Proponent for this request was to expedite the development of the Project. However, in the opinion of the Board, and based on impact assessment principles and Section 12.4.3 of the NLCA, NIRB refused this request.<sup>5</sup> Stephanie Briscoe, Executive Director of NIRB gave the following explanation for the Board’s decision:

“I appreciate that it makes financial sense to expedite certain preliminary phases of a larger project, but to do so ...may preclude an unbiased review of the related project. For example, should the tank farm be constructed before the mining project is reviewed, the dis/approval of the mine could not be evaluated fairly or at all; there would be no easy way to avoid the inevitable added insistence to approve the mine due to the presence of 5,000,000 litres of fuel waiting to be used.”

Briscoe explained that the only exception to this rule would be if a separate proponent applied for the tank farm, meaning in essence, that the tank farm would have an independent application and utility should the Meadowbank Project not go ahead following a screening/review. Further, Briscoe stated that a final recourse is available to the Proponent on this issue. Section 12.10.2(b),

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federal environmental assessment panel referred to in section 12.4.7 of the Agreement in relation to the screening of projects by that Board and the review of projects by that Board or panel.”

<sup>3</sup> Cumberland Resources Ltd., Meadowbank Gold Property: Project Description Report, March 2003.

<sup>4</sup> Letter to Craig Goodings, Manager of Environmental and Regulatory Affairs, Cumberland Resources Ltd., dated April 22, 2003, from Stephanie Briscoe, Executive Director, Nunavut Impact Review Board.

<sup>5</sup> Section 12.4.3 operates to avoid duplicate assessments by requiring a full assessment of known components that are part of the original project proposal. The section states:

“Any application for a component or activity of a project proposal that has been permitted to proceed in accordance with these provisions shall be exempt from the requirement for screening by NIRB unless:

- (a) such component or activity was not part of the original proposal; or
- (b) its inclusion would significantly modify the project.”

the exemption section of Article 12 of the NLCA, is available to the Proponent to argue to the Board, if the Project is sent to a public review following screening.<sup>6</sup>

In a letter dated July 29, 2003, NIRB informed the Meadowbank distribution list that the NPC had completed its review of the Project and had determined that it conforms to the Keewatin Land Use Plan.<sup>7</sup> In the same letter, NIRB requested that all parties assess the proposed Project for potential ecosystemic and socio-economic effects, and indicate a preferred course of action under Section 12.4.4 of the NLCA. This section directs NIRB to screen project proposals and recommend to the Minister one of the following options:

- “(a) the proposal may be processed without a review under Part 5 or 6; NIRB may recommend specific terms and conditions to be attached to any approval, reflecting the primary objectives set out in Section 12.2.5;
- (b) the proposal requires review under Part 5 or 6; NIRB shall identify particular issues or concerns which should be considered in such a review;
- (c) the proposal is insufficiently developed to permit proper screening, and should be returned to the proponent for clarification; or
- (d) the potential adverse impacts of the proposal are so unacceptable that it should be modified or abandoned.”

Initially, NIRB set August 29, 2003 as the deadline for comments. However, due to the August power blackout in Ontario, and at the request of Natural Resources Canada, NIRB extended the deadline to September 5th, 2003.<sup>8</sup> In all, ten submissions were received from a variety of interested parties including government departments, local associations, committees and community organizations. These submissions will be outlined following a summary of the proposed Project.

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<sup>6</sup> Section 12.10.2 states: “Notwithstanding Section 12.10.1, where a project proposal has been referred for review pursuant to Part 5 or 6, approvals or licences for exploration or development activities related to that project may be issued if:

(a) the activity falls within Schedule 12-1; or

(b) the activity can, in the judgment of NIRB, proceed without such a review.”

<sup>7</sup> Letter to the Meadowbank distribution list, dated July 29, 2003, from Stephanie Briscoe, Executive Director, Nunavut Impact Review Board.

<sup>8</sup> Letter to the Meadowbank Distribution List, dated August 25, 2003, from Stephanie Briscoe, Executive Director, Nunavut Impact Review Board.

## **B. Project Summary**

The proposed Meadowbank Gold Project involves the construction and operation of a large combined surface and underground gold mine located on Inuit owned lands approximately 70 km north of the Hamlet of Baker Lake, Nunavut in the Kivalliq Region. Five significant gold deposits, the North Portage, Third Portage, Bay Zone, Goose Island, and Vault, have been identified on the property and total gold resources are estimated to be 3.08 million ounces. The operational life of the Project is anticipated to be approximately 9 to 10 years, however, the Proponent states in the Project Description that, as a result of continued exploration, it is reasonable to expect that the mine's life will be extended.<sup>9</sup> The mine is expected to employ approximately 250 personnel on bi-weekly rotations. Some of the key items of the proposed Project are summarized as follows<sup>10</sup>:

- The Project property covers 28,888 hectares and consists of ten grandfathered Crown mining leases and three exploration concessions from Nunavut Tunngavik Inc.
- The Project is designed as a “fly-in/fly-out” operation with an airstrip providing the only year-round access to the site. All construction and operating supplies for the project will be transported on ocean freight systems to facilities constructed at the Hamlet of Baker Lake, which will include barge unloading facilities, laydown area, and tank farm.
- A 92 km long winter haulage route from Baker Lake to the Project will provide seasonal access and re-supply, while permanent, on-site mine access roads will connect the open pit areas to site infrastructure.
- On-site facilities will include a process plant, power plant, maintenance facilities, tank farm, fuel storage, water treatment plant, sewage treatment plant, airstrip, and accommodations for approximately 250 mine personnel. Waste heat captured with heat exchangers will be used to heat the entire plant and camp building complex.
- Mine construction and pre-stripping is scheduled to begin in March 2005 and mining/processing in December 2006. Production will be split between open pit mining (approx. 87%) and underground mining (approx. 13%).

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<sup>9</sup> Cumberland Resources Ltd. Meadowbank Gold Property Project Description Report, March 2003, at p. i.

<sup>10</sup> The key items listed are taken directly from the Proponent's Project Description Report, March 2003.

- Open pit mining will occur in three separate areas and water retention dykes will be constructed from mined rock at two of these pits to allow for the mining of ore beneath shallow lakes. A low permeability vertical slurry wall will be constructed in the centre of the dykes to minimize seepage from surrounding lakes into the work area. Residual seepage through the dykes will be collected in a series of collection ditches and sumps, and treated if necessary. Construction of the dykes will utilize floating sediment curtains to minimize the release of suspended solids into surrounding lake waters.
- As mine scheduling permits, mined rock will be placed in either land-based or submerged storage areas. A classification system will be used to identify both potentially acid generating (“PAG”) and metal leaching rock, and PAG mine rock will be stored in designated storage areas designed for long term stability.
- Ore will be processed according to one of two options currently under consideration. Both options include standard crushing and grinding, gravity concentration and carbon in pulp (CIP) technology. One option leaches total mill tonnage, while a second preferred option considers the leaching of a flotation concentrate only. Both process options include cyanide leaching, cyanide destruction, and refining to doré bars. The combined leach residue slurry will be treated with an air/SO<sub>2</sub> process to detoxify the free cyanide in the tailings stream.
- The treated tailings will either be disposed of under a minimum cover of water in the Second Portage Lake impoundment area or be used for underground hydraulic backfill.
- The fresh water supply for the mine and camp will be pumped from Third Portage Lake. Mine process water will be primarily reclaimed from the tailings pond, and sewage will be collected and pumped to a sewage treatment plant. Sewage effluent will be discharged to the tailings pond.
- The Proponent has conducted environmental baseline studies in the project area, the results of which have been integrated into the current Project design.
- Valued ecosystem components (VECs) have been identified in consultation with regulatory authorities and members of the local community. They are: caribou, muskoxen, wolf, wolverine, fox & grizzly bear, small mammals, raptors, waterfowl & other birds, marine mammals, fish populations & habitat, air quality, water quality, surface water quantity & distribution, vegetation cover, and permafrost.

- With the use of scientific and traditional knowledge gathered to date, the Proponent has identified archaeological sites, traditional use areas, employment/training opportunities, and traditional/current lifestyle as valued socio-economic components (VSECs).
- The Proponent plans to implement a project environmental management system consisting of three key elements: an integrated environmental management plan, a formal environmental awareness program, and an ongoing environmental monitoring program.
- Upon conclusion of activities, the Proponent plans to fully decommission the mine by sealing the underground mine facilities, removing the mill and ancillary buildings, recontouring disturbed areas, and reclaiming the vegetation.

### ***C. Rationale for Sending the Application to a Hearing***

Subsection 12.4.2(a) of the NLCA directs NIRB, when screening a project, to recommend a public review when in its judgment:

- “(i) the project may have significant adverse effects on the ecosystem, wildlife habitat or Inuit harvesting activities,
- (ii) the project may have significant adverse socio-economic effects on northerners,
- (iii) the project will cause significant public concern...”

Pursuant to Subsection 12.4.2(b), a review is generally not required when, in NIRB’s judgment, the project is unlikely to arouse significant public concern and:

- “(i) the adverse ecosystemic and socio-economic effects are not likely to be significant, or
- (ii) the project is of a type where the potential adverse effects are highly predictable and mitigable with known technology...”

Subsection 12.4.2(c) instructs NIRB to give greater weight to the provisions of 12.4.2(a) in determining whether a review is required or not.

In making the determination that a public review is necessary, NIRB gave consideration to the following factors. Firstly, the size and scope of the proposed Project leads NIRB to believe that it has significant impact potential, and therefore requires review under Part 5 or 6 of the NLCA.

Secondly, based on NLCA Section 12.4.2(a)(i), NIRB feels that many of the project's effects and potential impacts on the ecosystem, wildlife habitat or Inuit harvesting activities are uncertain. Thirdly, NLCA Section 12.4.2(a)(ii) directs the Board to take into account the socio-economic effects of the Project, and it is unclear at this point whether the Project may have significant adverse socio-economic effects on northerners. This uncertainty can lead to public concern. Finally, due to the magnitude of this Project as described above, and based on NLCA Section 12.4.2(a)(iii), NIRB anticipates a high level of public concern regarding the effects of construction and operation on the local environment and impacted communities.

#### ***D. Review of Submissions***

NIRB received submissions from Indian and Northern Affairs Canada ("INAC"), Fisheries and Oceans Canada ("DFO"), Environment Canada ("EC"), Natural Resources Canada ("NRCan"), Nunavut Tungavik Incorporated ("NTI"), Health Canada ("HC"), Aqigiq Hunters and Trappers Organization, Kivalliq Inuit Association ("KIA"), the Baker Lake Community Land and Resources Committee ("CLARC"), the Department of Community Government & Transportation (Kivalliq Region) ("CG&T"), and the Hamlet of Baker Lake.

Of these ten submissions, five indicated a preferred course of action under Section 12.4.4 of the NLCA, and of these, *all* determined that a public review is appropriate in these circumstances. The parties supporting this Section 12.4.4 decision are:

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

NIRB received a submission from Environment Manager Glen Stephens, dated September 5, 2003, outlining INAC's assessment of the potential impacts of the Project.<sup>11</sup> Stephens wrote that overall, INAC found the Project Description to be well organized and well written. He continued:

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<sup>11</sup> Letter to NIRB dated September 5, 2003, from Glen Stephens, Manager of Environment, Department of Indian and Northern Affairs Canada.

“We appreciated the effort and the attention that the proponent has already directed toward the environmental assessment process, including collecting baseline information and consulting with the community of Baker Lake.”<sup>12</sup>

Based on the potential for adverse effects, INAC identified the following concerns:

- The potential for acid rock drainage and the effectiveness of containment and mitigation.
- The effect of extreme stresses on the containment systems and the incorporation of contingency planning into structural designs.
- Anticipated changes in the thermal status of lakes caused by the addition of tailings, and the subsequent impact on frozen ground and containment structures.
- Alternatives analysis for site infrastructure.

As a result of these concerns, the need for more details regarding the proposed environmental management system, and an assessment of the outstanding studies identified by the Proponent, INAC recommended that, pursuant to Section 12.4.4(b), the proposal be subject to a review under Part 5 or 6 of the NLCA.

#### Fisheries and Oceans Canada (DFO)

In a letter to NIRB dated September 5, 2003, Habitat Biologist Stephanie Critch outlined DFO's concerns and strongly recommended that the proposal receive a review under Part 5 or 6 of the NLCA.<sup>13</sup> DFO's position was based primarily on the extensive nature of the proposed open pit and underground mining. In particular, DFO expressed concerns about the potential changes to, and possible loss of, fish habitat resulting from the:

- use of water retention dykes to allow for open pit mining beneath two lakes;
- dewatering of lake areas for mining and tailing disposal;
- construction of a docking facility in Baker Lake;
- construction of three lake crossings for an all season road;
- release of effluents from dewatering of pits, mine process water and tailings; and
- sediment releases related to construction activities.

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<sup>12</sup> *Ibid*, at pp. 1-2.

<sup>13</sup> Letter to NIRB dated September 5, 2003, from Stephanie Critch, Habitat Biologist, Fisheries and Oceans Canada, Eastern Arctic Area.

DFO stated that, in order to fully assess the Project's potential impacts to fish and fish habitat, as well as the public right to navigation, additional information is required.

#### Environment Canada (EC)

NIRB received a submission dated August 27, 2003, from Environmental Assessment Specialist Colette Meloche, recommending that the Project be subject to a public review.<sup>14</sup> This recommendation was based on the nature of the Project's construction and operation activities, which EC believes creates the potential for adverse environmental impacts. Specifically, Meloche pointed firstly to the extensive nature of the proposed underground and open pit mining activities. According to EC, the construction of water retention dykes to allow for mining beneath shallow lakes will result in terrain and lakebed disturbances, and may impact the permafrost regime. Secondly, EC expressed concerns about water quality since there is the potential for acid rock drainage to occur given the volume of waste rock created, and the release of wastes from the cyanide leachate method for gold recovery could have potential impacts on downstream water quality. Thirdly, EC noted that the mine requires the construction of a 92 kilometre winter haulage road, a 7 kilometre, two lane all season road, and a 1,650 metre long airstrip. Meloche concluded:

“Given the potential for these activities to produce significant environmental impacts, it is Environment Canada's opinion that a review under Section 12.4.4(b) of the NLCA would be appropriate.”<sup>15</sup>

#### Natural Resources Canada (NRCan)

In a submission to NIRB dated September 5, 2003, Senior Environmental Assessment Officer John Ramsey, expressed concerns with the proposal relating to hydrology, hydrogeology, permafrost, waste rock and tailings disposal, effluent treatment and open pit abandonment.<sup>16</sup> In its review of the Project Description, NRCan determined that:

“The Primary impacts on the environment during the operating life of the mine and afterwards will be associated with the waste rock and tailings disposal areas, and with the abandoned mine excavations. As the report indicates that sulphide minerals are associated

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<sup>14</sup> Letter to NIRB dated August 27, 2003, from Colette Meloche, Environmental Assessment Specialist, Environmental Protection Branch, Environment Canada.

<sup>15</sup> *Ibid*, at p. 1.

<sup>16</sup> Letter to NIRB dated September 5, 2003, from John Ramsey, Senior Environmental Assessment Officer, Office of Environmental Affairs, Natural Resources Canada.

with the ore zones, there is presumably an acid-producing potential for any waste materials associated with this activity.”<sup>17</sup>

In order to evaluate the likely impact of these mine components, NRCan requested that the Proponent provide more detailed information in the following areas:

- Description of waste rock, ore and probable tailings mineralogy.
- Evaluation of the acid producing potential for waste rock and tailings, and the nature of contaminants that may be produced.
- Cyanide destruction.
- Characterization of sites to be used for waste rock and tailings disposal.
- Description of the structures/containment systems to be used for the disposal of waste rock and tailings.
- Evaluation of the long-term environmental effects of the abandoned open pits.

In a follow-up letter to NIRB dated September 8, 2003, NRCan relayed some additional comments on the earthquake aspects of the Project.<sup>18</sup> In regards to the nature of the proposed underground and open pit mining activities and, specifically, the construction of water retention dykes to allow for mining beneath shallow lakes, NRCan recommended that the earthquake resistance of the dykes should be evaluated. According to NRCan:

“Dyke failure would represent a major safety concern to any miners in the pit. Earthquake shaking represents a process for the simultaneous catastrophic failure of the dykes.”<sup>19</sup>

Based on the concerns outlined, NRCan concluded:

“Given the nature of this proposal – a gold mine with an estimated ore production capacity of 4,700 t/d, NRCan believes that the proposal warrants a review under Part 5 or Part 6 (12.4.4(b)) of the Nunavut Land Claims Agreement.”<sup>20</sup>

#### Nunavut Tungavik Incorporated (NTI)

Stefan Lopatka, Senior Adviser for the Lands and Resources Department submitted a letter to NIRB dated August 11, 2003, recommending that pursuant to Section 12.4.4(b), the proposal

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<sup>17</sup> *Ibid*, at p. 2.

<sup>18</sup> Letter to NIRB received September 8, 2003, from John Ramsey, Senior EA Officer, Office of Environmental Affairs, Natural Resources Canada.

<sup>19</sup> *Ibid*, at p. 1.

<sup>20</sup> Letter dated September 5, 2003, from NRCan at p. 1.

undergo a review under Part 5 of the NLCA.<sup>21</sup> According to NTI, a Part 5 review would best ensure that Inuit have input into the Project review. Lopatka stated:

“The project has the potential to create significant positive impact on the economic growth of the Kivalliq region of Nunavut; however, the project also has the potential to affect various environmental and social-economic factors. As such, the project must meet the environmental and socio-economic goals and requirements of the Inuit of that region and all of Nunavut.”<sup>22</sup>

The following parties expressed concerns over the impact of the Project, or asked for the clarification of certain issues; they did not, however, select option 12.4.4(b) or any other screening option:

#### Health Canada (HC)

In a letter to NIRB dated August 28, 2003, Environmental Assessment Officer Carolyn Dunn outlined HC’s concerns with the proposed Project.<sup>23</sup> Primarily, Dunn expressed concern over the absence of human health from the identified list of VSECs for the Project, and recommended that in the forthcoming environmental assessment, the Proponent utilize the definition of health provided by the World Health Organization, which is “...a state of complete physical, mental and social well-being, and not merely the absence of disease.” In making recommendations to the Proponent for the future Project assessment, HC stated that the environmental assessment should include: an examination of the potential health effects to workers; the health impacts associated with the socio-economic implications of the Project; and a consideration of changes to water quality on human health. Dunn concluded:

“Throughout this EA, the linkages between the environment and human health need to be recognized and assessed...wherever potential effects to air, water, soil or food are identified, the potential pathways to human receptors need to be assessed.”<sup>24</sup>

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<sup>21</sup> Letter to NIRB dated August 11, 2003, from Stefan Lopatka, Senior Adviser, Environmental, Water and Marine Management, Lands and Resources Department, Nunavut Tunngavik Incorporated.

<sup>22</sup> *Ibid*, at pp. 1-2.

<sup>23</sup> Letter to NIRB dated August 28, 2003, from Carolyn Dunn, Environmental Assessment Officer, Office of Environmental Health Assessment Services, Health Canada.

<sup>24</sup> *Ibid*, at p. 2.

### Aqigiq Hunters and Trappers Organization

Andre Tautu of the Aqigiq Hunters and Trappers Organization in Chesterfield Inlet, submitted a comment form to NIRB on August 6, 2003, in which he indicated the following concerns about the Project proposal: water quality; wildlife, marine mammals, fish and their respective habitats; traditional use of land; and human health issues.<sup>25</sup> The organization requested that NIRB keep them informed of any developments regarding these issues.

### Kivalliq Inuit Association (KIA)

In a letter to NIRB dated September 5, 2003, Director of Lands Luis Manzo outlined a number of questions for clarification by the Proponent and some issues of concern to the local people.<sup>26</sup> These included: drainage from the proposed land dump; seepage from waste rock; water quality in tailings pond; impact of explosives; emergency measures in case of accidents or chemical spills; access of elders to Project blue prints; the need for larger print information sheets; and questions regarding the Proponent's employment and training plans for the community.

### Baker Lake Community Land and Resources Committee (CLARC)

CLARC representative Philip Putumiraqtuq submitted a comment form to NIRB on August 18, 2003 in which he indicated the following concerns about the Project proposal: water quality; terrain; air quality; wildlife; marine mammals, birds, fish and their respective habitats; heritage resources; traditional use of land; Inuit harvesting activities; local development; and human health issues.<sup>27</sup> The organization requested the ongoing monitoring of these areas and recommended that NIRB expedite the application process for this proposal.

### Department of Community Government & Transportation (Kivalliq Region) (CG&T)

In a letter to NIRB dated September 5, 2003, Community Planner for the Department, Robert Chapple, forwarded a concern regarding the Project's impact on local development in the area. Chapple stated, "...The development of the mine may result in an increase in the population

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<sup>25</sup> NIRB Comment Form received August 6, 2003, from Andre Tautu, Aqigiq Hunters and Trappers Organization.

<sup>26</sup> Letter to NIRB dated September 5, 2003, from Luis Manzo, Director of Lands, Kivalliq Inuit Association.

<sup>27</sup> NIRB Comment Form received August 18, 2003, from Phillip Putumiraqtuq Kivalliq Inuit Association Director and Community Land and Resources Committee representative.

which would increase demands on services and housing...” and noted that there is an adequate supply of residential, commercial and industrial lots in Baker. In offering CG&T’s support for the proposal, he pointed out that the Planning and Land Headquarters of CG&T in Kugluktuk must approve the proposed tank farm and marshalling area, after which a development permit must be obtained from the Hamlet.

### Hamlet of Baker Lake

In a letter to NIRB dated September 5, 2003, Chair of the Town Planning Committee Karen Yip conveyed a list of questions and concerns from members of the community regarding the storage facility site planned near Baker Lake.<sup>28</sup> The Committee offered a number of recommendations relating to the safety and monitoring of the storage facility, including:

- The storage of chemicals and dangerous goods in an environmentally safe manner with consideration given to weather conditions, access by wildlife, vandalism, and possible accidents.
- Access to hazardous materials safety equipment and facilities on site.
- The training and equipping of all facility workers and the local fire department in order to respond effectively to possible accidents involving hazardous materials.
- Ongoing testing for contamination.
- An annual review of the operation of the facility to assess progress and ensure accountability.

The Committee relayed these concerns to NIRB:

“...[W]ith the hope that Cumberland will receive the approval necessary to proceed with their project in a timely manner, and that the health, safety and well-being of the community is assured.”<sup>29</sup>

### ***E. Issues of Concern to NIRB***

In brief summary, there are a number of issues that need to be more fully addressed by the Project Proponent. The Board strongly believes that public input through a hearing into these

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<sup>28</sup> Letter to NIRB dated September 5, 2003, from Karen Yip, Town Planning Committee Chair – Hamlet of Baker Lake.

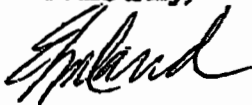
<sup>29</sup> *Ibid*, at p. 1.

issues is necessary to ensure that the concerns of those directly impacted are better known and then taken into account and dealt with following the public hearing. These issues, most of which are local or regional, include:

- Waste rock and tailings disposal, the release of mine effluents and the resulting impact on water quality.
- Impact of the construction and operation of water retention dykes to allow for mining beneath shallow lakes and related safety concerns.
- The creation of emergency clean-up procedures and safety measures for the fuel storage site and lake areas.
- Further details on the economic viability, scope, and need of the Project.
- A detailed alternatives analysis, particularly regarding site infrastructure, route of Vault Haul Road, and tailings and wastewater containment and treatment.
- A more detailed project description, especially in regards to the cyanide destruction process, the characterization of waste rock and tailings, potential for ARD, the evaluation of the earthquake resistance of dykes and the long-term environmental effects of abandoned open pits.
- A more detailed assessment of transboundary and cumulative effects.
- Further detail on socio-economic impacts.

While the ultimate decision on a Part 5 review (NIRB only) or Part 6 (Federal) is yours to make, it seems logical that a Part 5 review is more proper than a Part 6, because most of the ecosystemic and socio-economic impacts are in the Nunavut Settlement Area. See section 12.4.7(b) of the NICA

Yours truly,



Elizabeth Copland  
Chairperson

cc: Distribution List