Pre-Hearing Decision

Concerning

The Meadowbank Gold Project

NIRB File # 03MN107

Cumberland Resources Ltd.

Meadowbank Gold Project Application

Date of Hearing: June 6 - 9, 2005
Date of Decision: July 14, 2005

Nunavut Impact Review Board (NIRB)
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EXECUTIVE SUMMARY

Pursuant to the Nunavut Land Claims Agreement, the function of the Nunavut Impact Review Board is to assess the extent of the regional environmental and socio-economic impacts of the Meadowbank Gold Project proposal to determine whether the Project should proceed, and if so, under what terms and conditions. In carrying out this function, the primary objective by law is at all times to protect and promote the existing and future well-being of the residents and communities of Nunavut and the protection of Nunavut's ecosystemic integrity.

On June 6 to 9, 2005 the Nunavut Impact Review Board conducted a Preliminary Hearing Conference to hear arguments on the following nine issues:

1. The schedule for the Preliminary Hearing Conference exchange of information;
2. Intervener identification and registration;
3. The list of issues to be dealt with at the Final Public Hearing and clear statements of the issues;
4. Technical reports and other documents for the Final Public Hearing;
5. The schedule to be followed by the Parties for the completion of reports needed *prior* to the Final Public Hearing;
6. The schedules, dates, times and place(s) of the Final Public Hearing;
7. Special procedures, if any, to be followed at the Final Public Hearing;
8. Any motions that may be needed before the Final EIS is filed, or the Final Public Hearing commences; and
9. Any other matters that may aid in the simplification of the hearing (i.e. segregation of the hearing into different segments, technical hearings vs. non technical community meetings).

Picture 1 - Pre Hearing Conference ("PHC"): Baker Lake (Courtesy of Ramli Halim)

On these issues the Nunavut Impact Review Board held that the venues for the Final Hearing are to be Baker Lake, Chesterfield Inlet, and Rankin Inlet. The list of parties and interveners will remain the same as for this Pre-Hearing Conference. The dates for the Final Hearing will be set once further information, including the Final EIS, are received from Cumberland.

Subject to permission from Cumberland, the Board will schedule a site visit as part of the Baker Lake venue. The Board also reserves the right to schedule another Technical Meeting to deal with technical issues arising after the Final EIS is filed, especially with respect to the all-weather road.

In order to facilitate scheduling of expert witnesses, primary technical presentations will take place in Baker Lake and the Final Hearing agenda will be organized by specific technical topics. All parties are required to ensure sufficient technical expertise is available at Chesterfield Inlet and Rankin Inlet to respond to technical issues arising from consultation with these communities.

Subject to direction from the Minister, the all-weather road is included in this Part 5 review. To do otherwise would be inconsistent with the Board's mandate under the NLCA, and would result in undesirable project splitting. The Final Hearing on the all-weather road will not take place until the NPC releases a positive Conformity Decision, or Cumberland otherwise receives an exemption from the Minister.

The Board believes Cumberland will resolve most of the parties' outstanding concerns by complying with the EIS Guidelines, its Conformity Submissions and by implementing the 107 items set out in Appendix 1. In addition to the commitments set out in Appendix 1, the Board has set out specific issues related to wildlife, fisheries and aquatics, waste rock and tailings management, climate change, the all-weather road, shipping and marine, socio-economics and traditional knowledge to which Cumberland is expected to respond. Cumberland is particularly encouraged to respond directly to socio-economic issues that have arisen over the course of the Technical Meeting and the PHC.

Cumberland bears the burden of meeting NIRB's information requirements, and accordingly, the Board declines to set out a process or schedule for Cumberland's

submissions. The Board believes a timely exchange of technical information between Cumberland and the parties *prior* to the preparation of the Final EIS is essential to ensure the Final EIS will meet NIRB's requirements. Therefore the Board requests that Cumberland inform the Board of the dates when that Appendix 1 information will be released

1. BACKGROUND

1.1 Procedural (Project) History

On March 31, 2003, Cumberland Resources Ltd (the "Proponent" or "Cumberland") submitted its Project Description Report for the Meadowbank Gold Project (the "Project" or "Meadowbank") to the Nunavut Impact Review Board ("NIRB" or the "Board").

Following receipt of the Proponent's application, on September 23, 2003 the Board sent its Screening Decision to then-Minister Robert Nault of the Department of Indian Affairs and Northern Development and proposed a review under Part 5 or 6 of Article 12 of the Nunavut Land Claims Agreement ("NLCA"). In reply, on December 3, 2003, Minister Nault referred the Project to the NIRB for a Part 5 Review.

On December 18, 2003 NIRB circulated the Draft Environmental Assessment Guidelines for the Project to the Distribution List.[1] On February 20, 2004, the Board provided the Proponent with the Final Environmental Assessment Guidelines (the "EIS Guidelines") for the Project and advised the Proponent that a *Draft* Environmental Impact Statement ("DEIS"), based on the EIS Guidelines was expected.

The Proponent filed the DEIS on January 4, 2005. A Conformity Review of the DEIS was undertaken by NIRB. NIRB solicited input from the Distribution List and comments were received from Indian and Northern Affairs Canada ("INAC"), Department of Fisheries and Oceans Canada ("DFO"), Environment Canada ("EC"), Natural Resources Canada ("NRCan"), Health Canada, Transportation Canada, Government of Nunavut ("GN") Department of Environment ("GN-DOE") and Department of Economic Development and Transportation ("GN-EDT"), Kivalliq Inuit Association ("KIA"), the Athabasca Denesuline Negotiation Team, and the Manitoba Denesuline. In order to discuss the DEIS and the NIRB review process with the public, public meetings and consultations were held in Chesterfield Inlet, Baker Lake, and Rankin Inlet in February and April 2005.

[1] The Distribution List is comprised of various stakeholders and interested parties involved in the Project's process and development.

On March 8, 2005 the Proponent advised that their feasibility study resulted in adjustments to the Project design, including an increase in mine throughput tonnage, changes to the water tailings discharge, and a recommendation for a 102 kilometre long all-weather access road from the Hamlet of Baker Lake to the mine site.

On March 21, 2005 NIRB advised the Proponent that the DEIS *generally* conformed to the EIS Guidelines, meaning that the DEIS captured many, but not all, of the requirements set out in the EIS Guidelines. Detailed information on the deficiencies to be addressed prior to the technical review of the Project was provided to the Proponent. In addition, NIRB advised the Proponent that if the Project changes resulting from the Proponent's feasibility study affected the original Nunavut Planning Commission ("NPC") Conformity Determination, NIRB may cease the review process until the NPC review is complete.

On March 23, 2005 NIRB received notice that the Proponent proposed field investigation work for the all-weather road. NIRB consulted with KIA, Nunavut Tunngavik Inc. (NTI), GN-DOE, INAC and Transport Canada. On April 25, 2005 NIRB invoked section 12.10.2(b) of the NLCA and exempted, subject to terms and conditions, the Proponent's related Land Use Application in order to allow the road field investigation work to proceed.

On April 4, 2005 and April 30, 2005 the Proponent submitted Conformity Submissions to address deficiencies and provide clarifications in the DEIS. On May 5, 2005, NIRB determined that the Proponent's DEIS, supporting documents and Conformity Submissions sufficiently conformed to NIRB's Final Guidelines to set the particulars for the Technical Meeting and Pre-Hearing Conference (PHC).

On June 2 and 3, 2005 NIRB held a Technical Meeting with the Proponent, NIRB staff and technical consultants, and representatives from INAC, DFO, NRCAN, EC, GN-DoE, NTI, and KIA. The purpose of the meeting was to resolve outstanding technical issues prior to the PHC. The PHC was held from June 6 to 9, 2005 in Baker Lake, Chesterfield Inlet, and Rankin Inlet.

1.2 Project Description

1.2.1 Site Features

The Project involves the construction and operation by Cumberland of an open pit gold mine located in the Kivalliq Region of Nunavut, approximately 70 km north of the Hamlet of Baker Lake on Inuit-owned surface lands. The Proponent estimates total mine-able resources of 3.8 million ounces, with 3.2 million ounces recoverable and an investment of $300 million over the life of the project.

The Project is anticipated to have a life of approximately 12.3 years, which will be comprised of a 2-year construction period followed by 8.3 years of mine operation and a 2-year post-closure period. Approximately 350 jobs will be created through operating the mine, with 250 people onsite and 100 out on rotation. The Project is planned as a "fly-in/fly-out" operation with personnel rotated every several weeks by air transportation. The Proponent estimates local employment of 75 jobs during the construction phase and 70 jobs during operations.

Access to Mineral Deposit

Open pit mining is planned in three separate areas. The Portage open pit, comprised of North Portage, Third Portage and Bay Zone, is expected to be the largest, measuring 2,000 metres long, 200 to 400 metres wide, and 175 metres deep. The Goose Island open pit is less than 500 metres in diameter and 150 metres deep. The Vault open pit, located 5 kilometres north of Portage and Goose Island and connected by a road, is designed to be approximately 900 metres long, 600 metres wide and 185 metres deep.

Some of the areas to be mined are currently under shallow lakes. Dikes will be built to allow for temporary removal of the water (de-watering) from these areas with fish removed before de-watering. At closure, the pits will be re-flooded and fish returned.

On-site Infrastructure

On-site infrastructure for the proposed Project includes:

- An ore-processing plant;
- A power plant;
- Maintenance facilities;

- A fuel tank farm, with capacity for 30M litres of fuel;
- Explosives storage area;
- Accommodation facilities for approximately 250 personnel;
- A sewage treatment facility;
- On-site access and haul roads;
- An airstrip; and
- Potable water treatment plant.

The Project also includes infrastructure located about 2 kilometres east of the Hamlet of Baker Lake. This infrastructure includes barge unloading facilities, a storage laydown area, a fuel tank farm with capacity for 40 million litres of fuel, storage for explosives and interconnecting roads.

Ore Processing

The ore will be processed based on the conventional gold plant flowsheet consisting of primary gyratory crushing, grinding, gravity concentration, cyanide leaching with cyanide destruction and refining to gold dore bars in a carbon-in-pulp circuit. The mill will be designed to operate 365 days of the year, with a process capacity of 7,500 tonnes of ore per day.

Tailings Management

Tailings will be transported via pipeline from the process plant to the tailings storage facility. The tailings storage facility is planned as an impoundment created within the northwest arm of Second Portage Lake through lake dewatering and construction of a retaining dike across the lake. The dike will be built across the west side of the North Portage Pit to control seepage from the tailings impoundment into the pit. The tailings will be treated with a sodium metabisulphite process designed to detoxify the free cyanide in the tailings stream. The tailings will initially be stored under water, but thereafter the majority will be deposited on land.

A cover of non-acid generating rock will be placed over the tailings surface to maintain frozen tailings and minimize erosion from surface water runoff and wind-blown dust. The tailings storage facility is designed to fill the Northwest arm of Second Portage Lake and will be closed progressively during mine operations as the height of the tailings deposit increases.

Waste Rock Management

A classification system will be used to identify the appropriate use and storage for all mine rock. This system will identify Potentially Acid Generating (PAG), non-PAG and potentially metal leaching rock types. PAG rock will be stored in designated areas designed for long-term stability. Waste rock from North Portage, Third Portage and Goose Island open pits will be stored on the surface north of Second Portage Arm and to the west of the Vault haul road, and will be capped with non-acid-generating rock. Most of the waste rock from the Vault pit will be stored in an area northwest of the pit and current geochemical predictions indicate it will not be necessary to place capping over the Vault waste rock storage area.

Water Management

Infrastructure such as diversion ditches, sumps and water attenuation facilities are planned to collect and store surface water and groundwater that may be affected by mining activities for treatment, if necessary, prior to discharge to the environment. Natural or constructed diversion channels draining to neighbouring lakes will control water that can be diverted away from developed areas without contact with Project facilities.

Water Supply

The mine and camp fresh water supply will be pumped from Third Portage Lake and discharged to an insulated main storage tank. Potable water will be treated in a chlorination system before distribution to the site. Mine process water will be reclaimed from the tailings pond.

Waste Management

The Project will require the transport, storage and use of hazardous materials on a daily basis. These will be handled according to the Mine Act Regulations and spill response training will be mandated.

Inorganic solid wastes will be placed in a designated landfill within the Portage Waste Rock Facility, if suitable, or packaged for shipment and disposal off site. Solid waste from accommodation camp, kitchen and offices will be transported to a diesel fired incinerator located downwind of the facilities.

Sewage will be collected and treated at a sewage treatment plant consisting of a rotating biological contactor treatment system. During operations the treated effluent will be discharged to Third Portage Lake.

Transportation of Materials to Site

Supplies will be shipped directly to Baker Lake by barge. Supplies may be temporarily stored at the Baker Lake staging facility before transport to the mine site via a 102 kilometre all-weather road. Two routes for the all-weather road are currently under assessment. With the inclusion of an all weather road, Baker Lake may also provide airport services for the mine.

1.2.2 Baseline Conditions

Deposits of glacial till cover the Project area with an average thickness of 2.75m. The land surface is underlain by continuous permafrost, except under large bodies of water where taliks may occur. The active layer is estimated to be between 2 and 4 metres. Groundwater in the active layer either flows directly to, or through, local depressions that drain to Second and Third Portage Lakes. The deep groundwater regime is connected by open taliks predicted to exist beneath Third and Second Portage Lakes. A talik is also predicted to exist beneath Vault lake, although it is predicted to not be connected to the deep groundwater regime.

The Project area is surrounded by lakes that are oligotrophic, nutrient poor and relatively unproductive but with good water quality. Baseline groundwater studies have indicated that the Acid Rock Drainage and Metal Leaching potential for the various material types on site vary from low to high.

The Project area is characterized by a continuous vegetation cover interspersed with bedrock outcroppings. Vegetation baseline studies indicated no sensitive, rare or endangered species or communities.

Wildlife baseline studies indicate that the Project area is not used as a calving area for caribou. Caribou from several herds and muskoxen herds have been observed at the

site. One grizzly bear with cubs, the occasional wolverine, and frequent wolf sightings have been documented. Arctic fox, arctic hare, ermine, sik sik, voles and lemmings are other mammal species regularly observed on site. Breeding bird species have been documented and raptors have been seen but no active nests have been observed. Waterbirds occur at low densities and waterfowl nesting has not been confirmed within the local study area. Key fish species in the Project region include land locked arctic char, lake trout, and round whitefish.

1.2.3 Socio-Economic Environment

The population of the Kivalliq Region is spread among seven communities, the largest being Rankin Inlet (over 2200 people) and the smallest being Whale Cove (less than 350 people). Baker Lake is the only inland community (over 1500 people). Baker Lake family incomes are substantially lower than other communities in the Kivalliq and Nunavut.

Archaeological surveys in the Project area identified a number of temporary camp sites. No Pre-Dorset or Dorset sites were encountered, and one Thule site was visited.

2. SUMMARY OF THE SUBMISSIONS FROM PARTIES

2.1 Kivalliq Inuit Association and Nunavut Tunngavik Incorporated

NTI, along with KIA, engaged with Geovector Management, Senes Consultants and G. R. MacFarlane & Associates to review the DEIS. A joint Conformity Review submission from NTI and KIA was received by NIRB on May 20th, 2005. The submission identified potential technical deficiencies in the project that may result in significant adverse effects on the environment and project life. NTI and KIA attended the Technical Meeting, and KIA provided written comments on the draft list of Cumberland's commitments which resulted from that meeting.[2]

[2] See: Exhibit 7 Comments from Parties (Cumberland, INAC, DFO, KIA, Acres) on Draft List of Commitments.

NTI and KIA participated at all PHC venues, where they identified the following significant non-compliance issues in the DEIS:

- Proposed production increase from 5,500 to 7500 tonnes per day not reflected in the DEIS when it increases the size of the workforce, the mining fleet, processing plant, power plant, fuel storage and transportation requirements, fuel usage, other consumables, tailing disposition rate, air emissions, production life, water balance, and the timing of discharge into Third Portage Lake;
- Failure to provide essential mine-able reserves numbers.
- Omission of the all-weather road with significant potential to impact on fish and fish habitat, caribou, vegetation and associated socio-economic impacts;
- Deficiencies in the tailings permafrost encapsulation and the need to consider higher than predicted global warming in the DEIS;
- A need for detailed testing of acid-rock drainage potential in the waste rock piles;
- Analysis of the potential for lake level increases during de-watering to cause Third Portage Lake to drain to the Back River System; and
- The lack of a Marine Plan, including research into 10,000-tonne barges going into the channel, an assessment of the impact on fish, marine mammals and caribou, and the need to clarify the application of Section 6 of the NLCA.[3]

Other issues arising during the KIA/NTI PHC presentation included:

- Concern over the potential for soil slumping during de-watering;
- The need for a fish salvage plan;
- The potential for pit dike leakage through broken bedrock;
- The potential effect of Turn Lake crossing culvert construction;
- The need for long term groundwater monitoring wells;
- Permafrost development monitoring in tailings area;
- The assessment of the Vault attenuation pond potential to release metals and nitrates during re-flooding;
- The need to deter wildlife attraction to tailings including a plan to involve Nunavumiut in the deterrence plan; and
- Increased community liaison and Kivalliq consultation.[4]

On the nine PHC issues, KIA and NTI concurred with the Proponent subject to two additional comments. First, once the information the Proponent committed to provide is received, there may be additional work that must be done. Secondly, it is important for the Proponent to meet its commitment to produce documents “as best as they can as soon as they can”.[5]

[3] See: Exhibit 8 NTI/KIA Baker Lake PHC Presentation, and PHC Transcript, June 6, 2005, Volume 1, pages 169 to 177, lines 8 to 14.
[4] See: Pre-Hearing Conference Transcript [hereinafter “PHC Transcript’] , June 6, 2005, Volume 1, pages 177 to 179, lines 15 to 15.
[5] See: PHC Transcript, June 6, 2005, Volume 1, pages 190 and 191, lines 3 to 3.

2.2 Government of Nunavut

The GN, including the Department of the Environment, Department of Economic Development and Transportation, Department of Culture, Language, Elders and Youth, and Community Government and Services, provided a Conformity Review submission on May 20th, 2005. The submission focused on issues related to the all-weather road, community, wildlife impact assessment, regulatory regime, cumulative effects assessment, air quality and noise, hazardous materials management, geology (including acid rock drainage and metal leaching potential), terrain and permafrost, tailings management, water quality and closure. The GN also attended the Technical Meeting. Local representatives of the GN were present at the PHC as observers only.

2.3 Department of Fisheries and Oceans

The DFO provided a Conformity Review submission to NIRB on May 20th, 2005, focusing on impacts to fish and fish habitat. The DFO attended the Technical Meeting and provided written comments on the draft list of Cumberland's commitments which resulted from that meeting.[6]

The DFO participated in the PHC at all venues. The DFO presented several inadequacies related to the Project description in the DEIS that required resolution in a timely manner, including:

- The assessment of impacts of the all-weather road in the Final EIS;
- A description and assessment of the marine landing facility and shipping route;
- Identification of a single location for their fresh water intake pipe;
- Exploration of relocation and redesign options for the location and the orientation of dewatering dikes, specifically the westerly portion of the Goose Island Dike, and the east dike, as well as clarification of the location of the south dike;
- A more detailed assessment of alternatives for the tailings impoundment area in advance of the Final EIS, including strong justification if the preferred option is a fish-bearing water body and consideration of the need for designation under the Metal Mining Effluent Regulations of the *Fisheries Act* ;
- Alternatives to encroaching into Third Portage Lake due to the airport; and
- Provision of aquatic baseline data reports, the need for additional focused sampling as soon as possible, and comparison of the Proponent's fish habitat

[6] See: Exhibit 7 Comments from Parties (Cumberland, INAC, DFO, KIA, Acres) on Draft List of Commitments.

model to other models used in Northern mining projects and support for the model with baseline fisheries data.[7]

Items identified by the DFO as requiring further clarification and assessment include:

- Items related to the construction of the dike, specifically the source of till for the construction of the East and Bay Zone dike, their use of sediment curtains and the timing of the placement of ultramafic rock;
- Assessment of the impacts to fish and fish habitat of water crossing designs for the all-weather road and the Turn Lake crossing;
- The potential for failure of the connecting channel between Third and Second Portage Lakes after closure as well as the long term stability of the East Dike that may result in the permanent lowering of water levels in Third Portage Lake to be addressed in the Final EIS;
- A blast design report to take into consideration ice cover;
- Revised water quality predictions to determine productivity of fish habitat along the dikes during operation and closure, and if not productive, how long will it be before water quality improves to a point that sensitive life stages of fish are not impacted;
- The ultimate fate of salvaged fish from the dewatered water bodies;
- The effect of improving access to lakes supporting fish and the consideration of the impacts on existing fish populations; and
- In the closure and reclamation sections further clarification on site facilities to be disposed of in waste pits and the feasibility of removing additional dike area upon closure needs to be considered.[8]

The DFO was generally in agreement with the Proponent's position on the nine PHC issues.[9]

Picture 2 - Derick Moggy with Member of Public - PHC: Baker Lake (Courtesy of Ramli Halim)

[7] See: Exhibit 9 DFO Baker Lake PHC Presentation, Exhibit 22 DFO Rankin Inlet PHC Presentation and Exhibit 23 DFO Closing Statement. See also: PHC Transcript, June 6, 2005, Volume 1, pages 191 to 199, lines 10 to 9.
[8] See: PHC Transcript, June 6, 2005, Volume 1, pages 199 to 202, lines 10 to 17.
[9] See: PHC Transcript, June 6, 2005, Volume 1, page 202, lines 18 to 21.

2.4 Environment Canada

EC provided a Conformity Review submission on May 20th, 2005, which focused on issues related to the environmental effects related to migratory birds, aquatic quality, hydrology and climatology, air quality, spills and hazardous materials management, waste management and cumulative effects. EC attended the Technical Meeting but was not present at the PHC.

EC commented on the nine issues of the PHC in their May 20th submission, recommending the following:

- Responses to technical issues raised in intervenor submissions be incorporated into the Final EIS;
- The Final EIS should include the changes to the project that were outlined in the Feasibility Study press release dated February 24, 2005;
- Technical hearings should not be separated from non-technical community meetings;
- NIRB should not set the dates for the final hearings until the Final EIS has been submitted and an initial review of the document completed by NIRB staff; and
- NIRB not go forward to a final public hearing until the NPC has determined if the proposed all weather-road is in conformance with the Keewatin Regional Land Use Plan.

2.5 Natural Resources Canada

NRCan provided a Conformity Review submission on May 20th, 2005, focusing on the deep groundwater flow regime, the quantity and quality of pit inflows, pit lake stratification and trophic status, lake sediments characterization, bedrock and overburden characterization, exposure and use of bedrock and overburden materials, tailings characterization and thermal modeling, mine waste management, acid rock drainage, and tailings reclamation and closure plan. NRCan attended the Technical Meeting and provided written comments on the draft list of Cumberland's commitments which resulted from that meeting.[10]

[10] See: Exhibit 7 Comments from Parties (Cumberland, INAC, DFO, KIA, Acres) on Draft List of Commitments.

NRCan participated at all PHC venues. The focus of deficiencies identified by NRCan was on groundwater flow, including the identification of deficiencies and requests for more detailed information and analysis related to the pit inflows and pit lakes; overburden used in road and dike construction; lake sediments; tailings freezeback, reclamation and closure; bedrock characterization; ultramafic capping, and the use of explosives, including issues related to the factory, storage, emergency response plan and spills contingency plan.[11] NRCan did not review the all-weather road due to incomplete geotechnical research at the time of the PHC.[12]

2.6 Indian and Northern Affairs Canada

INAC, with technical assistance provided by expert consultants at EBA Consulting Limited and Brubacher Development Strategies Inc., provided a Conformity Review submission on May 20th, 2005. INAC's submission focused on aspects of technical information relating to socioeconomics, engineering and physical science. INAC and their consultants attended the Technical Meeting and provided written comments on the draft list of Cumberland's commitments which resulted from that meeting.[13]

INAC participated in the PHC at all venues. INAC's presentation at the PHC provided a short summary of the issues raised by INAC in its full written review of the DEIS.[14] Overall, INAC found that the DEIS minimally presents and references baseline data, making a traceable and reproducible view of impacts against the baseline conditions extremely difficult, and when combined with insufficient analytical assessments, INAC is unable to share the Proponent's confidence in their assessment results.[15]

INAC's most significant concerns related to the absence of baseline date, particularly with dike stability of the tailings impoundment area, water quality related to acid-rock drainage, metal leaching, deep groundwater contamination and the cumulative effects

[11] See: Exhibit 12 NRCAN Baker Lake PHC Presentation. See also: PHC Transcript, June 7, 2005, Volume 2, pages 306 to 315, lines 20 to 3.
[12] See: PHC Transcript, June 7, 2005, Volume 2, page 313, lines 19 to 24.
[13] See: Exhibit 7 Comments from Parties (Cumberland, INAC, DFO, KIA, Acres) on Draft List of Commitments.
[14] See: Exhibit 11 INAC Baker Lake PHC Presentation, Exhibit 17 INAC Chesterfield Inlet PHC Presentation, Exhibit 20 INAC Rankin Inlet PHC Presentation, and Exhibit 21 INAC Closing.
[15] See: PHC Transcript, June 7, 2005, Volume 2, page 275, lines 9 to 16.

assessment.[16] INAC's key concerns with the socio-economic assessment was the Proponent's exclusive focus in the DEIS on Baker Lake, and that the Proponent has not provided information that demonstrates the full range of insight and interests from consultation processes with communities, stakeholders and vulnerable groups, nor do methodologies used to determine potential impacts appear to take into account differing components of the communities.[17] INAC also objects to the Proponent's use of the IIBA as the primary mitigation and monitoring tool, recommending that the Proponent explore other socio-economic mitigation and monitoring instruments in order to demonstrate that a proper mitigation and monitoring plan to maximize benefits and minimize negative effects is in place.[18]

Due to procedural concerns over inclusion of the all-weather access road in the scope of the Project currently under review, INAC declined to assess the all-weather road component of the Project until the land conformity review is conducted by the NPC and further direction is received from NIRB and the Minister as required.[19] However, INAC concurred with the Board that once the road application achieves conformity, it is in the best interest to include the all-weather road in the assessment and the Final Hearing.[20]

On the nine PHC issues, INAC recommended the Proponent submit a revised DEIS to address the outstanding information requirements or, alternatively, there be a series of information exchanges within prescribed time frames in order to permit review and comment on the information the Proponent agreed to provide at the Technical Meeting.[21] INAC further recommended that NIRB provide a minimum of 90 days following receipt of the Final EIS to complete a final technical review and recommended the 90 day review period not begin until the Proponent addressed all of the deficiencies identified by reviewers, and there be a final submission deadline of a minimum of ten days before the Final Hearing.[22] Finally, INAC recommended that the Final Hearing be segregated into topics rather than by party in order to better focus the Final Hearing, and recommended

[16] See: PHC Transcript, June 7, 2005, Volume 2, page 275, lines 17 to 21.
[17] See: PHC Transcript, June 7, 2005, Volume 2, page 277 to 279, lines 16 to 3.
[18] See: PHC Transcript, June 7, 2005, Volume 2, page 279, lines 4 to 14.
[19] See: PHC Transcript, June 7, 2005, Volume 2, page 273, lines 3 to 21.
[20] See: PHC Transcript, June 7, 2005, Volume 2, page 284, lines 13 to 17.
[21] See: PHC Transcript, June 7, 2005, Volume 2, page 280, lines 15 to 21.
[22] See: PHC Transcript, June 7, 2005, Volume 2, page 282, lines 5 to 18.

Baker Lake, Chesterfield Inlet and Rankin Inlet as the venues for the Final Hearing with technical hearings taking place only in Baker Lake.[23]

Picture 3 - INAC Presentation - PHC: Baker Lake (Courtesy of Ramli Halim)

2.7 Hamlet of Baker Lake

The Hamlet of Baker Lake provided a Conformity Review submission on April 15, 2005. The focus of the response was on community social programs, training and infrastructure. The Hamlet of Baker Lake also attended the Technical Meeting as an observer.

At the PHC, the Hamlet expressed "concern and frustration" that during the presentations "only a small percentage of time and effort seems to be focused on socio-economics."[24] The Hamlet's main concerns with the DEIS are the Proponent's reliance on the IIBA as the only document addressing socio-economic issues for the community, and a lack of specific details on training initiatives and infrastructure details.[25] While supporting the development of an all-weather road, the Hamlet also expressed concern about the loss of long-term economic development opportunities that would result if the road is dismantled when the mine is closed.[26]

[23] See: PHC Transcript, June 7, 2005, Volume 2, page 282 to 283, lines 6 to 19.
[24] See: PHC Transcript, June 6, 2005, Volume 1, page 221, lines 4 to 7.
[25] See: PHC Transcript, June 6, 2005, Volume 1, page 220, lines 7 to 13.
[26] See: PHC Transcript, June 6, 2005, Volume 1, page 220, lines 3 to 17.

2.8 Peter Tapatai

Mr. Peter Tapatai, a private business man operating Peter's Expediting from Baker Lake, spoke of his pride in the fact that NIRB, as an Inuit organization, was conducting the review of this project and that he was provided with an opportunity to present his views.[27] Mr. Tapatai spoke to the Board about the benefits private business has brought to his business, including job creation for local Inuit and support for accessing training funds.[28] Mr. Tapatai also spoke to the immediate need for jobs in the Kivalliq communities,[29] Cumberland's commitment to consulting with the community over the past seven years and the future benefits to the community from increased employment.[30]

Picture 4 - Peter Tapatai - PHC: Baker Lake (Courtesy of Ramli Halim)

[27] See: PHC Transcript, June 6, 2005, Volume 1, pages 152 to 153, lines 1 to 16.

[28] Mr. Tapatai described the benefits that private business such as Cumberland, Kennacot, DeBeers and BHP have brought to the community:

> Just a little history about the activity last year. Last year we were able to hire a total of 26 employees from January through May, and of the 26, 25 of them were local Inuit. We hauled 1.8 million pounds over our winter route.
>
> This year was definitely much slower because of the process that has to take place. Over seven years, Peter's expediting has been able to help access training funds for receiving and accepting dangerous goods. And we were able to partner up with Cumberland, and we offered their Inuit employees to be certified.

See: PHC Transcript, June 6, 2005, Volume 1, page 153, lines 10 to 20.

[29] See: PHC Transcript, June 6, 2005, Volume 1, page 155, lines 20 to 25.

[30] See: PHC Transcript, June 6, 2005, Volume 1, pages 156 to 158, lines 12 to 25.

3. COMMENTS FROM LOCAL RESIDENTS

3.1 Baker Lake

Baker Lake residents expressed concerns primarily related to socioeconomic issues at the PHC including the need for funding and timing of job training programs and public consultation, particularly for employment opportunities.[31] The need for clear identification of the party responsible for the road during mine operation, security for the road, road access to hunters and fishers,[32] and the post closure plans[33] for the road were also raised.

The Baker Lake Public also expressed a number of concerns related to wildlife interactions with the road[34] and the tailings facility,[35] blasting effects on fish,[36] the potential for a fish salvage program,[37] and the potential effects of climate change on the modelling for the Project.[38]

Picture 5 - Micheal Aleik receiving prize from Acting Chair Albert Ehaloak - PHC: Baker Lake (Courtesy of Ramli Halim)

[31] See: PHC Transcript, June 6, 2005, Volume 2, pages 294 to 296, lines 11 to 23.
[32] See PHC Transcript, June 6, 2005, Volume 2, pages 268 to 269, lines 9 to 19.
[33] See PHC Transcript, June 6, 2005, Volume 2, page 293, lines 9 to 13. See also: page 326, lines 11 to 19.
[34] See: PHC Transcript, June 6, 2005, Volume 2, page 268, lines 10 to 16.
[35] See: PHC Transcript, June 6, 2005, Volume 2, page 325, lines 2 to 11.
[36] See: PHC Transcript, June 6, 2005, Volume 2, page 326, lines 2 to 10.
[37] See: PHC Transcript, June 6, 2005, Volume 2, pages 294, lines 1 to 5.
[38] See: PHC Transcript, June 6, 2005, Volume 1, pages 50 to 51, lines 14 to 24.

3.2 Chesterfield Inlet

The Public in Chesterfield Inlet expressed concerns primarily related to socioeconomics, fish, and shipping.

Socioeconomic concerns included training benefits during mine operation and post closure, funding for training, timing of training programs, point of hire, public consultation, and the potential for economic benefits to Chesterfield Inlet.[39]

Fish-related concerns included the effects of dewatering on fish and fish habitat,[40] effects of sedimentation on fish development, the effect of mine waste on fish, and the suitability of new habitat for fish.

The effect of shipping on the marine environment was a concern specific to the Chesterfield Inlet residents. Concerns included the number of barges and the shipping route, the potential for fuel spills, and the effects of spills on marine mammals.[41] The identification of the Party responsible for cleaning up potential spills was also raised as an important issue.[42] The effect of increased shipping generally, including noise from shipping activities, on marine life and the surrounding environment was also raised as an issue.[43]

Other concerns expressed by the Public in Chesterfield Inlet were related to monitoring of spills at the mine site,[44] the effect of climate change on tailings management and the responsibility for effects on future generations,[45] and the financial responsibility for mine site reclamation.[46]

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[39] Chesterfield Inlet educator Marian Jackson posed five questions for Cumberland regarding employment opportunities, skill requirements, funding for training, training-on-the-job, and relevance of training to post-closure employment. See: Exhibit 16. See also the comments by Eli Kimmaliajuk regarding the need for Chesterfield Inlet residents to have an opportunity for employment: PHC Transcript, June 8, 2005, Volume 3, page 373, lines 11 to 15.
[40] See PHC Transcript, June 8, 2005, Volume 3, page 370, lines 6 to 9. See also: page 379, lines 8 to 13.
[41] See: PHC Transcript, June 8, 2005, Volume 3, page 418, lines 7 to 24.
[42] See: PHC Transcript, June 8, 2005, Volume 3, page 371 to 372, lines 20 to 6.
[43] See: PHC Transcript, June 8, 2005, Volume 3, page 432, lines 5 to 13.
[44] See: PHC Transcript, June 8, 2005, Volume 3, page 433, lines 19 to 24.
[45] See: PHC Transcript, June 8, 2005, Volume 3, page 368, lines 12 to 19.
[46] See: PHC Transcript, June 8, 2005, Volume 3, page 371 to 372, lines 6 to 20.

3.3 Rankin Inlet

Joe Kaludjak, a member of the Keewatin Caribou Management Board and Vice-President of the Kivalliq Inuit Association, commented on the caribou monitoring activities undertaken by the Keewatin Board and of the need for funding for an updated caribou population survey.[47] A member of the CLARC Committee was concerned for the potential for fish and the environment generally to become damaged by mine chemicals.[48]

4. CUMBERLAND RESOURCES LTD.

Cumberland attended the Technical Meeting as well as the PHC in all venues. In general, the Proponent submitted that the DEIS was sufficient and that it would meet all of the requirements of NIRB in finalizing the EIS.

At the end of the Technical Meeting, with input from other parties, Cumberland put together a list of commitments, set out in Appendix 1, which will be discussed further in the next section. Cumberland's views on the nine PHC issues are also discussed in the next section.

Picture 6 - Cumberland Resources Limited - PHC: Baker Lake (Courtesy of Ramli Halim)

[47] See: PHC Transcript, June 9, 2005, Volume 4, pages 532 to 533, lines 7 to 10.
[48] See: PHC Transcript, June 9, 2005, Volume 4, pages 582 to 583, lines 5 to 10.

5. ANALYSIS OF THE ISSUES

5.1 Nine Issues to be decided upon

Parties were directed to address the following nine issues:

1. The schedule for the Preliminary Hearing Conference exchange of information;
2. Intervener identification and registration;
3. The list of issues to be dealt with at the Final Public Hearing and clear statements of the issues;
4. Technical reports and other documents for the Final Public Hearing;
5. The schedule to be followed by the Parties for the completion of reports needed *prior* to the Final Public Hearing;
6. The schedules, dates, times and place(s) of the Final Public Hearing;
7. Special procedures, if any, to be followed at the Final Public Hearing;
8. Any motions that may be needed before the Final EIS is filed, or the Final Public Hearing commences; and
9. Any other matters that may aid in the simplification of the hearing (i.e. segregation of the hearing into different segments, technical hearings vs. non technical community meetings).

Picture 7 - Nunavut Impact Review Board members - PHC: Baker Lake (Courtesy of Ramli Halim)

5.2 Jurisdiction of the Board

NIRB conducted the PHC under the authority of Article 12, Part 5 of the NLCA.[49] NIRB generally conducts a PHC in order to identify and limit the issues of divergence among parties to the hearing, and to promote the efficient use of time at the final hearing.

[49] Section 12.5.3 states "NIRB may conduct its review by means of correspondence, public hearings or such other procedures as it deems appropriate to the nature of the project and range of impacts."

5.3 Board Decision regarding Nine Issues

Taking into account parties' submissions and comments from the public at the PHC, the Board's decision on the nine issues follows:

5.3.1 Date, Time and Place of Final Hearing[50]

The Board has decided the venues for the Final Hearing are Baker Lake, Chesterfield Inlet, and Rankin Inlet.

As for the Final Hearing dates, the Board has decided to await the further information from the Proponent including the Final EIS, before setting dates. On this point, the Board agrees with the Proponent that rather than prescribe a process and set dates, it is preferable to leave this matter open.[51]

5.3.2 Identification of Interveners/Parties[52]

The PHC venues were well-attended especially in Baker Lake and Chesterfield Inlet, and as such, the Board sees no reason to expand the list of parties or interveners.

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[50] Issue 6: The schedules, dates, times and place(s) of the Final Public Hearing.

[51] Cumberland's closing submission on this issue:

> So we think that NIRB could help us most if it identified the content of the FEIS, and we are suggesting to you with respect, that it is perhaps less helpful to the become really prescriptive in describing the process going forward for a couple of reasons.
>
> First of all, NIRB has the discretion to step in at any time if things aren't progressing the way you want it to, and secondly because we think that it would be more efficient if you let Cumberland, the proponent, which has the burden in any event, to work with and satisfy the reviewers and the intervenors in whatever way makes the most sense and is most effective without specifying that in three weeks we have to file this or in four weeks we have to have a meeting in so and so.

See: PHC Transcript, June 9, 2005, Volume 4, page 609, lines 2-15.

And

> …90 days is what the NIRB rules provide for subsequent to the FEIS filing, and if there are problems that arise with respect to the contents at that point, we would prefer to continue to collaborate and work with the other parties and to try and resolve those problems before going into the final hearing. That's something that should happen as a matter of course, and I'm not sure that specifying a rolling series of 90-day periods is really going to help anybody.

See: PHC Transcript, June 9, 2005, Volume 4, pages 610 and 611, lines 4-21.

[52] Issue 2: Intervener identification and registration.

5.3.3 Motions/Special Procedures[53]

Direction on procedures regarding the production of further documents by the Proponent is discussed in the next section. Any party including the Proponent may seek any additional direction from the Board once the Proponent files further information.

Site visit: The Board has decided that it would be helpful to do a site visit as part of the Final Hearing. Subject to receiving permission from the Proponent, weather restrictions and so on, the Board will schedule the site visit as part of the Baker Lake venue. More information on matters such as the proposed scope of the visit will be forthcoming closer to the Final Hearing.

Segregation of the Final Hearing into different segments: In order to facilitate scheduling of expert witnesses, the Board has decided that the primary technical presentations will take place in Baker Lake and the Final Hearing agenda will be organized by specific technical topics to facilitate addressing one topic at a time. However, the Board advises the Proponent and other parties that it is necessary to have sufficient technical expertise available at Chesterfield Inlet and Rankin Inlet to address technical issues arising from consultation with these communities.

Pre-hearing Technical Meeting: Regarding special procedures, the Board found great value in the Baker Lake Technical meeting and reserves the right to call another such meeting after the Final EIS is filed. The purpose of such a meeting would be to deal with technical issues arising from the Final EIS, especially with respect to the all-weather road component of the Final EIS.

Motions before the Final EIS is filed : During the PHC, INAC made a motion to the Board seeking direction on whether the all-weather access road should be included as part of NIRB's current Meadowbank review. The Board's answer to that question is found in the following section.

[53] Issue 7: Special procedures, if any, to be followed at the Final Public Hearing; Issue 8: Any motions that may be needed before the Final EIS is filed, or the Final Public Hearing commences; and Issue 9: Any other matters that may aid in the simplification of the hearing (i.e. the segregation of the hearing into different segments, technical hearing vs. non technical community meetings).

5.3.4 Key Issues and Information Gaps[54]

The PHC identified major concerns of parties. In general, the PHC illustrated parties' worries about:

(1) the all-weather road (and the inclusion of it on NIRB's Review) and the involvement of the NPC regarding the same issue;

(2) information gaps in the current DEIS; and

(3) the timing and the release of information by the Proponent related to the information gaps, much of which is addressed by the Proponent's Commitments (see Appendix 1).

The Board will discuss these three major concerns next, and conclude with additional areas of emphasis that NIRB would like the Proponent to follow in the preparation of the Final EIS.

[54] Issue 1: The schedule for the PHC exchange of information; Issue 3: The list of issues to be dealt with at the Final Public Hearing and clear statements of the issues; Issue 4: Technical reports and other documents needed for the Final Public Hearing; and Issue 5: The schedule to be followed by the Parties for completion of reports needed prior to the Final Public Hearing.

5.3.4.1 All-Weather Road

This issue produced perhaps the most controversy and concern from both a factual perspective and from legal and procedural perspectives as well.

Legal Concerns: INAC posed the following question to NIRB: How could the Board do a screening of the all-weather road portion of the project, if NIRB did not have that portion in front of it at the time NIRB referenced the project to the Minister for review? [55]

The Board has contemplated the dilemma, and answers as follows.

The question arose from the fact that the original project description filed by the Proponent and reviewed by the NPC for conformity to the Keewatin Land Use Plan did not include a reference to an all-weather road between Baker Lake and the mine site. Therefore, the road was not an explicit component of the project description which the NPC, upon making its conformity decision, referred to NIRB for screening and upon which NIRB completed its screening, recommending a further review to the Minister and culminating with the Minister's approval of this Part 5 Review. Since that time, NIRB has been informed of the Proponent's intention, as a result of its internal feasibility study, to incorporate an all-weather road into the Project under review. The documentation for the all-weather road was also recently sent to the NPC for a conformity determination. At the time of this PHC Decision the NPC has not released that conformity decision.

The Board has decided the answer to the question is yes, the all-weather road is included in this Part 5 review. The reasons for the decision and authority to do so follow:

[55] PHC Transcript, June 7, 2005, Volume 2, page 238, lines 22 to 25

First, to re-screen the road at this point is illogical and could either result in duplication of the original result, with the added time and wasted resources, or it could, at least theoretically, lead to a decision that would send parties down a different environmental assessment (EA) path.[56] Under NLCA section 12.4.2(a), the Board is required to determine that a project proposal should be subjected to a review when, in its judgement, the following matters arise:

(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; or
(iv) the project involves technological innovations for which the effects are unknown.

Since the public concern over the all-weather road was quite high, it seems logical that the result of the screening would be to send it to public review—which is exactly where we are at this point with the rest of the Project. Re-screening the road (or to screen it for the first time, depending on whose argument you believe) could also lead to different EA decisions, those found in 12.4.4 (a), (c), or (d), and that possibility is not only absurd, the process to do so results in project splitting, something that the Board disagrees with.[57] We will discuss reasons why project splitting is inappropriate and use case law to assist us with the question of scoping, next.

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[56] The Board notes that none of the parties, including INAC and the Proponent, argued for a separate environmental assessment of the all-weather road. INAC's stated its position as follows,

> Once the road application achieves conformity, INAC concurs with NIRB that it is in the best interest to include the all-weather road in the assessment, so the final hearings can address all components of the project.

See: PHC Transcript, June7, 2005, Volume 2, page 284, lines 13 to 17:

Similarly, the Proponent argued to include the all-weather road in the current review process:

> Mr. Chairman, I simply want to say that it is our position that the way the that NIRB has handled the question of the all-weather access road up until this point is quite consistent with the Nunavut Land Claims Agreement, not contrary to it.
>
> We are also going to outline for you our view that there are not two separate project descriptions, but rather only one. And that consequently, it would be problematic, and here I think I agree completely with Mr. Cavanagh and INAC, it would be very much of a problem if two reviews had to be done…

See: PHC Transcript, June 7, 2005, Volume 2, page 245, lines 3 to 13.

[57] The Board's view on the need to eliminate the risks of project splitting was provided to INAC in a May 17, 2005 letter. At the same time the Board assured INAC that while NIRB decided, in consultation with the NPC, to proceed with the PHC to gather the views of all parties on all of the issues related to the EIS and the final hearing, the completion of the review process, including the final hearing, would not occur until such time as the NPC issued its conformity ruling on the all-weather road.

There are three core elements of environmental impact assessment laws. First, environmental assessment laws are “look before you leap” laws, requiring environmental assessment to take place prior to the commencement of development. Second, good environmental impact assessment requires the consideration of alternatives to the proposed development. Third, the need for public participation is an essential element of environmental decision making. All three of these core elements are present in the Article 12 of the NLCA.[58]

Project splitting has a number of potential negative effects on these three core elements of good EA. Of primary concern is that defining a project too narrowly precludes a full consideration of all of the potential environmental, economic and social impacts of a project, either geographically or in the scope of the factors considered prior to the project proceeding. The result is that the environmental impacts of the project may be minimized relative to the cumulative effects of the full project, thus permitting individual segments of an otherwise unacceptable development to proceed.

Similarly, project splitting may impact on the range of alternatives that are considered during the EA process. A project that is initially narrowly scoped may result in fewer feasible alternatives available for consideration. For subsequent stages of a project, the range of alternatives available for segments of a project may be constrained by the preceding development.

Project splitting may also limit public participation in the decision making process by effectively limiting the scope of interested parties that are entitled to be consulted and/or by stifling public opposition to the project because each individual decision is of insufficient size or effect to arouse sufficient public concern to create effective opposition. The result is that the project is allowed to proceed and becomes very difficult

[58] Section 12.10.1 prohibits the issuance of a license or approval required for a project to proceed until the NIRB screening, or review if required, is completed. Section 12.5.2 (i) requires, where appropriate, that an impact statement contain information regarding options for implementing the proposal. The need to consider alternatives is also implicit in the requirements to take steps to avoid and mitigate adverse impacts (section 12.5.2(d)) and to optimize benefits of a project (section 12.5.2(e)). The provision for public hearings (section 12.5.3) and the requirement for NIRB to take public concern into consideration when screening a project (section 12.4.2(a)(iii)) and to consider the priorities and values of the residents of the Nunavut Settlement Area when reviewing a project (section 12.5.5(c)) reflect the core element of public participation.

to stop. More importantly, what is lost is the enhanced decision making that results from the focus on values, rather than technical evidence, that occurs with public participation.

The importance of the scoping decision to the EA of a project was highlighted by the Federal Court's decision in *Citizens' Mining Council of Newfoundland and Labrador v. Canada (Minister of the Environment.)* In its finding, a scoping decision under the *Canadian Environmental Assessment Act* ("CEAA") is judicially reviewable at the time it is made rather than at the completion of the EA process:

> I am not persuaded that judicial review is premature in regard to a decision, by the responsible authority, determining the scope of the project which will be assessed, and which assessment that authority will later approve or disapprove. That decision is not merely a recommendation; rather it meets a statutory requirement and provides the basis for the process of the assessment from that point on and, as a consequence, in my opinion it is a decision subject to judicial review.
>
> In any event, even if the s.15 determination is viewed as an interlocutory decision, it is my view that extraordinary circumstances, within the dicta of the Court of Appeal's decision in Szczecka v. Canada (Minister of Employment and Immigration), exist to warrant review in this case. *The scoping decision is fundamental to the assessment that is to be undertaken. In my view, it is of sufficient significance in the assessment process that it is reviewable when made, and an applicant need not wait until the assessment is completed to commence judicial review of a determination under s. 15 of the Act, on the scope of a project*.[59] [Emphasis added.]

Like CEAA,[60] the NLCA does not define the process of scoping a project. In the case of CEAA, the *Responsible Authority's Guide* (the "RA Guide") which forms part of the reference materials published by the Canadian Environmental Assessment Agency, provides the authorities responsible under CEAA for project scoping (the "RAs") with guidance.[61] The Federal Court of Appeal in *Bow Valley Naturalists Society v. Canada*

[59] (1999), 29 C.E.L.R. (N.S) 117 (F.C.T.D.), at paragraphs 49 and 50.

[60] In *Bow Valley Naturalists Society v. Canada (Minister of Canadian Heritage)*, [2001] 2 F.C. 461, (C.A), [hereinafter "*Bow Valley Naturalists*"], at paragraph 25, the Federal Court of Appeal when considering CEAA stated:

> The Act does not define the process of scoping of the project. Neither does it define the term "scope." Nor does it provide any direction to the responsible authority in determining which physical works should be included within the scope of the project

[61] *Responsible Authority's Guide to the Canadian Environmental Assessment Act,* Federal Environmental Assessment Review Office (FEARO).

(Minister of Canadian Heritage) found that the RA Guide was helpful to both RAs and the courts.[62]

For purposes of scoping a project under subsection 15(1) of CEAA, the RA Guide states that RAs should consider a two step "principle project/accessory" test, with the accessory step requiring consideration of the two criteria of interdependence and linkage. For purposes of subsection 15(2), which permits a responsible authority to bring together multiple projects to form a single project for purposes of EA, the RA Guide sets out the criteria of linkage, interdependence and proximity as the appropriate criteria for consideration.

Using this same test, there is no question in the circumstances before the Board today that the mine is the principal project, and the road is an accessory project that is undeniably linked and interdependent with the mine. This was the Proponent's own conclusion: "Is the road physically linked and inseparable from the mine? Obviously so. It is going to go from Baker Lake to the mine site and nowhere else."[63] This supports the Board's decision to scope the road in with the mine in order to carry out an effective EA of the Project consistent with its obligations under the NLCA.

Second, NIRB has already 'scoped in' the all-weather road. That component was part of the DEIS guidelines 4.11.6, and 4.10.1.7. NIRB drafted these guidelines broadly for a reason, which was the ambiguity in the Proponent's discussion of that part of the Project Proposal.[64] While it was likely the Proponent referred to narrower alternatives to the winter road, the Board did not take the chance and scope the project, from an ecosystem perspective, narrowly.[65] Thus, while the Minister may not have known in his review of NIRB's original referral for a Part 5 review that the all-weather road was to be a part of the project, NIRB at this point believes it has the authority and obligation as part of our ecosystem mandate to include it in this Part 5 review. Even if we are wrong on that point, at the PHC, the Board asked all parties on the record if there was any

[62] *Bow Valley Naturalists Society,* at paragraph 20. However, the guidelines are not binding and may not "oust the statute", *Friends of the West Country Assn. v. Canada (Ministry of Fisheries and Oceans),* [1998] 4 F.C. 340 (T.D.), affd. 248 N.R. 25 (C.A.), application for leave to appeal to SCC refused 262 N.R. 395n, at paragraph 77.
[63] See: PHC Transcript, June 7, 2005, Volume 2, page 259, lines 1 to 4.
[64] See Meadowbank Project Description Report, page ii of summary and section 2.8, pg 2-22.
[65] One of the primary objectives of NIRB, as defined by section 12.2.5 of the NLCA, is to protect the ecosystemic integrity of the Nunavut Settlement Area.

objection to sending the all-weather road to a review and no objections were raised.[66] So, assuming for whatever reason the all-weather road had to be screened (or re-screened), NIRB asked this question during the PHC hearings and all parties agreed that it is wise to include the all-weather road in the current review. The legal result is once again a decision consistent with NLCA section 12.4.4(b): Send the all-weather road to review, where as a matter of NIRB's judgment, it already is.

Related to this point, if the Minister believes there is a requirement under section 12.5.1 to add issues related to the road into NIRB's review, the Board asks him, via this decision, to state those directions back to NIRB. Before sending directions back to NIRB, the Board believes it is appropriate for the Minister to review the broad terms of reference that the NIRB has now imposed for the Final EIS requirements specifically for the road component.

Finally, one of the reasons raised against NIRB's inclusion of the all-weather road in the current Part 5 review, was that the NPC (who has original jurisdiction because there is a land use plan approved for the Keewatin) has not yet made its conformity decision on the road. This is not a problem in law, however, because NIRB has consulted on this matter with the NPC and our Board stated in a letter to INAC that we would not conduct the Final Hearing or conclude the EA process until the NPC issues its conformity decision —assuming the decision is in favour of the Proponent.[67] Without a favourable conformity decision, or as the Proponent pointed out, a successful appeal to the Minister for an exemption, the issue of the all-weather road will not be the subject of a NIRB final hearing.

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[66] The Board asked the following of the parties:

> …out of a complete abundance of a caution and for the argument's sake only, to also invite any of the people here to comment on whether or not if NIRB were to re-screen the all-season road separately as of today right now, would any party in this proceeding, in this audience believe the result would be any different than the conclusion which finds us here today, under the Minister's authority today?
>
> I have heard counsel say that, no, everyone believes this is the right result, but I think we should offer any party to come forward if they believe it should have been done differently for NIRB's purposes.

See: PHC Transcript, June 7, 2005, Volume 2, page 265 to 266, lines 10 to 25:

[67] The Board in a May 17, 2005 letter to INAC assured INAC that while NIRB decided, in consultation with the NPC, to proceed with the PHC to gather the views of all parties on all of the issues related to the EIS and the final hearing, the completion of the review process, including the final hearing, would not occur until such time as the NPC issued its conformity ruling on the all-weather road.

Factual Investigations: NIRB believes the inclusion of the all-weather road poses major information challenges. These challenges include both significant biophysical information gaps as well as significant gaps in the assessment of the impacts from the road design and from encroachment of outdoor activity along the road from residents of Baker Lake. These matters are social concerns related to the environment. These challenges were described to the Board in a joint presentation by KIA and NTI:

> The change from winter-haul road to an all-weather road has created a completely new feature to the project. Cumberland has supplied a matrix of potential impacts and schematics of the road route and potential road cross sections. Their reviews have determined that the road requires 34 stream crossings, five which may need bridges and none of which have been assessed for environmental impacts; crosses five caribou migration routes; needs two to four borrow pits for construction, which will all need to be drilled and blasted; will require approximately 4 million tonnes of fill; will destroy 150 hectares of habitat, and just stating recently that Craig [representing the Proponent] mentioned now stating refuge stations every 10 kilometres.
>
> The reviewers feel that the potential impacts of fish and fish habitat, caribou, vegetation, and associated socio-economic impacts are substantial due to an all-weather road. The all-weather road will also improve access to lakes, potentially impacting fishing stocks.
>
> …The reviewers believe not including the road, a complete road study is a critical omission to the Draft EIS.[68]

Socio-economic impacts are a major concern of the Board *vis a vis* the road. These include human safety,[69] and issues related to the Proponent's plan to remove the road at the end of the Project.[70]

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[68] See: PHC Transcript, June 6, 2005, Volume 1, page 173 to174, lines 1 to 1. The issue of the potential impact on fish from both the design and access impacts of the all-weather road was also highlighted by the DFO:

> Water crossings designs for the all-weather road and Turn Lake crossing need to be further evaluated for their impacts to fish and fish habitat. Cumberland is using a no-fishing policy for operations but should assess the potential increased fishing pressure due to the all-weather road.

See: PHC Transcript, June 6, 2005, Volume 1, page 199, lines 17 to 22.

[69] Baker Lake resident Barb Mueller questioned the Proponent on road safety:

> Who is going to be responsible for security of that road? Who is going to go out and search for people that are lost or stuck in a blizzard on the road? I think that's important.
>
> We have lost – we have had many deaths. We have had deaths in the community because people were lost on the land, and I think the road – and I am not against it because I wouldn't mind getting in my truck and going 100 kilometres and seeing some things. But I think the security of road is important because it would be terrible to have somebody die in a truck or asphyxiate in a truck from carbon monoxide.

See: PHC Transcript, June 6, 2005, Volume 1, page 141, lines 15 to 26

[70] The ultimate fate of the all-weather road was raised as an issue in a number of submissions. Tara Fesyk, Economic Development Officer for the Hamlet of Baker Lake made the following submission:

5.3.4.2 Information Gaps in the DEIS

Subject to the requirements set out in the Key Issues section six (6) below and in the EIS Guidelines, the Board believes the Proponent will resolve most of the parties' concerns by complying with the Proponent's commitments in its Conformity Submissions[71] and by implementing the 107 items set out in the *Commitments by Cumberland Resources Limited during the NIRB Technical Meeting* filed by the Proponent as Exhibit 24 at the end of the PHC.

The Board thanks the Proponent for undertaking and committing to such a list following the Technical Meeting in Baker Lake. The Board accepts the Proponent's list of commitments and specifically incorporates these commitments, as set out in Appendix 1, as a key part of the Final EIS requirements.

> There are a lot of generalizations within the Draft EIS but not specific details as to community projects, training initiatives, infrastructure developments et cetera.
>
> Environmental issues are being covered by all other parties, but the Hamlet's biggest concern is our community.
>
> One thing I would like to comment on is regards to the all-weather road. Cumberland stated at the technical meetings last week that the Hamlet really wants this road. That is correct, we really support this. But also last week, Cumberland stated that they plan to dismantle the road at mine closure.
>
> How does this help the community? The road brings many economic development opportunities to us, for example, tourism opportunities, but if the road is dismantled after eight to ten years, what good is it to us in the long term? This is just an example where plans need to be negotiated with the Hamlet so that we can benefit from long-term infrastructure developments.

See: PHC Transcript, June 6, 2005, Volume 1, pages 220 to 221, lines 3 to 10.

In responding to questions from Baker Lake Resident Simone Tookoome, who in his remarks stated the road would be useful for hunters in the summer, the Proponent acknowledged the uncertainty surrounding its plans for the road at the end of the project:

> Second question about the road, we also listened to the various stakeholders, and we know that there is a great desire to keep this road for use, multiple use. And we anticipate through consultation that these issues will be resolved, what happens to the road, who uses it, but these are still things that will need to be negotiated with the various stakeholders.

See: PHC Transcript, June 7, 2005, Volume 2, page 327, lines 1 to 7:

The anticipated life of the road is also an important design consideration. See: PHC Transcript, June 6, 2005, Volume 1, page 217 to 218, lines 21 to 5.

[71] The Proponent submitted two Conformity Submissions to NIRB dated April 4, 2005 and April 30, 2005. NIRB expects Cumberland to uphold the specific commitments to the Final Environmental Impact Statement set out these submissions, as well as comply with the following general commitment as stated in their April 4, 2005 Conformity Submission:

> Cumberland wishes to assure NIRB and other Parties that the information contained in this response [April 4, 2005 Conformity Submission] and the results of our ongoing efforts to clarify and update selected aspects of the DEIS [April 30, 2005 Conformity Submission] will be included in Cumberland's Final EIS submission.

Here the Board also finds it appropriate to re-iterate the "frustration and concern" expressed by the Hamlet of Baker Lake over the small percentage of time and effort focused on the socio-economic impacts of the Project as discussed in section 6.8 of this Decision. We encourage the Proponent to respond directly to the socio-economic issues which have arisen over the course of the Technical Meeting and the PHC.

5.3.4.3 Timing and the Release of Information

The Board agrees with the Proponent's submission that it is the Proponent that carries the burden of satisfying the Board.[72] Therefore, as discussed in 5.3.1 above, the Board agrees with the Proponent that it is not appropriate at this time for the Board to prescribe a process and set dates for the submission of outstanding information, including the Proponent's commitments set out in Appendix 1.

However, the Board also accepts the submission of several parties that a timely exchange of technical information *prior* to the preparation of the Final EIS is essential to ensure the Final EIS will meet NIRB's requirements.[73] For this reason, the Board

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[72] Cumberland made the following closing submission on this issue:

> First of all, NIRB has the discretion to step in at any time if things aren't progressing the way you want it to, and secondly because we think that it would be more efficient if you let Cumberland, the proponent, *which has the burden in any event*, to work with and satisfy the reviewers and the intervenors in whatever way makes the most sense and is most effective without specifying that in three weeks we have to file this or in four weeks we have to have a meeting in so and so. [Emphasis added.]

See: PHC Transcript, June 9, 2005, Volume 4, page 609, lines 7 to 15.

[73] On this matter, NRCan submitted:

> …NRCan would like to recommend that there be exchanges of information between the proponent and intervenors to allow the confirmation that information deficiencies had been addressed in existing documents and soon-to-be-completed investigations.
>
> We certainly noticed that the – those deficiencies that sort of fall into our area of expertise could probably be resolved; however, *an opportunity to view and comment on the supplemental documentation with specific references to our points, as well as those of other intervenors, would substantially simplify our review of the Final Environmental Impact Statement, as well as aid in the preparation of the document.* [Emphasis added.]

See: PHC Transcript, June 9, 2005, Volume 4, page 603, lines 9 to 21.

See also the DFO's closing submission recommending to NIRB that several information requests be provided by the Proponent *prior to the preparation of the FEIS.* See: PHC Transcript, June 9, 2005, Volume 4, pages 587 to 590, lines 5 to 16; and the closing submission of INAC recommending that the required baseline data be provided by the Proponent to all interveners and the public *before the project's review*

requests that the Proponent inform the Board – and we will in turn notify all parties – of the date when that Appendix 1 information will be released by the Proponent. The Board expects that certain information will be released immediately (such as baseline or other data) from the Proponent or its consultants, understanding that other information such as analysis or studies, will take longer to prepare.

6. KEY ISSUES IDENTIFIED BY THE BOARD

As a result of listening to the views of the parties and the public, in addition to the Proponent's commitments set out in Appendix 1 *and to give portions of that list emphasis*, the Board would like the Proponent **to stress the following issues and concerns as part of its Final EIS**:

6.1 Wildlife

- Updated studies on wildlife movement in project area, including the area traversed by the all-season road and winter caribou.
- Better analysis of barriers and other options and approaches (such as air horns, fencing) to discourage wildlife from approaching the project area and especially the tailings impoundment areas.[74]
- More analysis and discussion regarding the potential for wildlife including birds and small animals to be affected by contaminants, including acid rock drainage and wind blown contaminants.

6.2 Fisheries & Aquatics

- More information on the dewatering program, including the effect on the water levels, connecting channels and fish passage for remaining lakes; and the fish-out program, including the process for removing the fish, the disposition of the dead or alive salvaged fish and the means for communicating the fish-out program to local residents.[75]

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proceeds into the final technical review. See: PHC Transcript, June 9, 2005, Volume 4, page 553, lines 13 to 20.

[74] The issue of protecting wildlife from approaching the tailing wildlife area was the subject of a number of questions from local residents. For example see: PHC Transcript, June 6, 2005, Volume 1, pages 137 to 138, lines 1 to 9.

[75] The outstanding issues regarding effects on fisheries arising from mine development, including impacts from dewatering, blasting, and the disposition of the salvaged fish were summarized in the closing statement of the DFO. See: PHC Transcript, June 9, 2005, Volume 4, page 572 to 578, lines 22 to 25. See also: Exhibit 22 DFO Rankin Inlet PHC Presentation.

The issue of dewatering and disposition of the fish was also the subject of questions from local residents. See for examples: PHC Transcript, June 6, 2005, Volume 1, page 228, lines 14 to 18, and PHC Transcript, June 9, 2005, Volume 4, pages 369 to 370, lines 9 to 25.

- Better description of the mine blasting program and the related plan to mitigate the effects of blasting on sensitive elements of fish habitat, such as eggs, food, and fry.
- More analysis on acid-rock drainage to give a greater confidence that aquatic ecosystems will be protected during mine operation and post closure.[76]
- The effect of changes from the 2005 Mine Operations Plan on water balance.[77]

6.3 Waste Rock and Tailings Management

- Better discussion of cover/capping program including cover materials, thickness, mitigation to avoid pollution of both surface and ground waters, and wind blown contaminants.[78]

6.4 Climate Change

- The impact of climate change on tailings management.[79]

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[76] INAC stated one of its largest concerns is water quality related to acid-rock drainage, submitting:

> There is also insufficient data on the geochemical and geological properties of the ore bodies and planned construction materials to be used. Without the required understanding of the rock and mineral characteristics, the impacts of water quality and its containment plans cannot be fully assessed. These materials may be acid generating and may release heavy metals into the surrounding environment with their use in the construction and operations of dikes, ditches, site roads and airstrips.

See: PHC Transcript, June 7, 2005, Volume 2, page 276, lines 2 to 11. See also Exhibit 8 KIA/NTI Presentation, page 7.

[77] This information was requested by several parties. See for example: Exhibit 7 Response to Commitments by Cumberland Resources Limited during NIRB Technical Meetings filed by Kivalliq Inuit Association, June 5, 2005, at paragraph 2, and filed by Acres International Limited, June 4, 2005, item #21.

[78] This issue is related to the acid rock drainage discussed in (b). INAC further stated a large concern is deep groundwater contamination from seepage from tailings:

> The Draft Environmental Impact Statement has insufficient data for INAC to be confident in Cumberland Resources' determination that contaminated seepage from the tailing into groundwater will not occur before the talik, located under the tailings impoundment area, freezes.

See: PHC Transcript, June 7, 2005, Volume 2, page 276, lines 15 to 20.

INAC included in Exhibit 7 INAC's Record of Commitments made by Cumberland Resources Ltd., the following additional requirements for the Proponent:

- Permafrost: Provide geothermal analyses and bathymetry data used by Cumberland Resources Limited to determine permafrost regime in area of Vault Lake and conclude that Vault Lake is a closed Talik.
- Groundwater: Provide structural assessment of major bedrock units in vicinity of proposed mining and overview assessment of regional structure.
- Geochemistry and water quality: Describe the volumetrics of waste rock compared to lithology, sulphide distribution and handling of different waste characteristics (ex. Quartzite 100% PAG) during operations. Discuss how, when and why a block model will be prepared to assist in acid base accounting.
- Geochemistry and water quality: Provide groundwater and geochemical model and hard calculations of mass load for revised pit attenuation plan in Goose Island Pit.

See also: Exhibit 12 NRCan Baker Lake PHC Presentation, slides 5 to 9.

[79] This issue is related to tailings management in (c). In Exhibit 8 KIA/NTI Presentation the following issues related to tailings management generally and climate change specifically were set out:

6.5 Chemicals Management

- Better description of cyanide used in the Project mining process.[80]
- Better description of the Project's proposed blasting program and ammonium nitrate and explosives materials storage and management.[81]

6.6 All-Weather Road[82]

- More information to address public safety, including the Proponent's plans regarding all aspects of the traffic control and every aspect of cooperation with the community to plan for and resolve concerns.
- Exploration of regulatory aspects of the road, such as traffic control, including consultation with the Hamlet of Baker Lake, the Federal Government (including INAC if appropriate), and the GN to determine the potential roles all levels of government will play in the regulation of the road.
- Long term options for the road, including the exploration of options to keep the road open after mine closure and maintenance plans for the road in the event the decision is made to keep the road open.

6.7 Shipping and Marine[83]

- Full explanation of potential impacts from increased shipping traffic and potential for spills, including consultations with Chesterfield Inlet and how and whether or not sections 6.2.2 and 6.2.3 of the NLCA, including the Government of Canada designation of a person who is liable for marine transportation, applies.[84]

Slide 9 and 12: Tailings area may not form permafrost as predicted, long term metals leakage into ground water could occur, leakage could occur under pit dam into Third Portage Lake.

Slide 9 and 11: Permafrost at Meadowbank could be thinner than indicated in draft EIS.

Slide 9 and 10: Global warming could be higher than predicted in draft EIS

Slide 21: Final EIS needs a plan for monitoring permafrost development in tailings area.

[80] A site specific cyanide management plan for transportation, storage and handling was requested by INAC. See: Exhibit 7 INAC's Record of Commitments made by Cumberland Resources Ltd.

[81] A description of explosives plant, wash facility and ammonium nitrate storage, as well as an emergency response plan and spill contingency plan were deficiencies identified by NRCan. See: Exhibit 12 NRCan Presentation, slide 10. NIRB anticipates this information is required to meet the requirements of the *Explosives Act*.

[82] See examples of the submissions of local residents and the Hamlet of Baker Lake on this issue in footnotes 69 and 70.

[83]The residents of Chesterfield Inlet expressed particular concern over the potential negative impacts of barges associated with the Project on marine life, this input was summarized by the DFO in its closing statement:

> And finally we heard from the Hamlet of Chesterfield Inlet yesterday who expressed concerns with the marine shipping near their community. The lack of information on the operation of the barge and shipping route along Chesterfield Inlet was expressed by several intervenors as well. Further details on the shipping route need to be provided, which includes how regulations will address the concerns to the marine environment and how any gaps can be addressed by Cumberland. DFO recommends to the Board that this information can be addressed in the Final Environmental Impact Statement.

See: PHC Transcript, June 9, 2005, Volume 4, page 590, lines 1 to 12.

[84] The issue of wildlife compensation under NLCA section 6.2.2 and 6.2.3 was raised by KIA and NTI. See: PHC Transcript, June 6, 2005, Volume 1, page 177, lines 2 to 5.

6.8 Socio-economics[85]

- Comparison with Arctic Bay/Nanisivik mine experience, and perhaps Eastmain, to assess the potential social and economics effects on the satellite community (of Baker Lake) affected by the mine. This includes the effect of closure of the mine and road on the 737 airstrip at the Project site.
- Effect of the mine on the Hamlet of Baker Lake and local service providers from problems caused by alcohol and safety.

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[85] On the need for further assessment of socio-economic impacts, the Board shares the concerns and accepts the recommendations of INAC as stated in its closing submission:

> Our key concerns with the socio-economic assessment and plan found in the Draft Environmental Impact Statement are with the spatial scale, that being the exclusive focus on Baker Lake, community consultation, methodology and the planned primary mitigation and monitoring tool used.
>
> Insufficient baseline data and discussion to support rationale why Baker Lake should be the exclusive community of focus and benefit for the exclusion of the other Kivalliq communities.
>
> The company has not demonstrated how residents of Baker Lake are more capable to gain and hold employment over other Kivalliq communities. This suggests that Baker Lake as a primary community is a policy of the company, a rationale that the company should discuss further.
>
> INAC is also concerned that Cumberland has also not demonstrated the full range of insight and interest from communities, stakeholders and vulnerable groups from their community consultation process.
>
> At this time, it is INAC's recommendation that Cumberland Resources provide the information acquired in their community consultation work and demonstrate how this information or concern has been addressed in the Draft Environmental Impact Statement. Specifically, the company should provide all their detailed records from the community involvement work.
>
> Methodologies used to determine potential impacts do not appear to take into account differing components of the community, such as family status, age, gender, previous wage employment, language capacity, et cetera. These are significant variables that will reflect the impact of the mine on the community, the residents and the company's ability to mitigate those impacts, both negative and positive.
>
> INAC recommends the proponent review their methodology and these factors' impacts upon valued socio-economic components.
>
> Cumberland Resources proposes to use the Inuit Impact Benefit Agreement as the primary mitigation and monitoring tool. The public is not privy to this confidential document, nor its negotiation.
>
> Cumberland should explore other socio-economic mitigation and monitoring instruments. In doing so, the company can then demonstrate that a proper mitigation plan and follow-up monitoring program for maximization of benefits and minimization of negative effects has been completed for review and approval through NIRB's procedures.

See: PHC Transcript, June 9, 2005, Volume 4, pages 550 to 552, lines 9 to 13.

The Board finds INAC's position on the issues of inadequate community consultation on socio-economic issues such as training, employment opportunities, and general well-being of the effected communities as well as the Proponent's over reliance on the Inuit Impact Benefit Agreement (IIBA) as the sole mitigation and monitoring tool are well supported by the submissions of the Hamlet of Baker Lake. See: PHC Transcript, June 6, 2005, Volume 1, page 220, lines 7 to 13. On this matter, the Board also notes the Proponent's acceptance of the difference between it obligation to negotiate benefits under the IIBA and the obligation to monitor and mitigate negative socio-economic effects of the Project. See: PHC Transcript, June 9, 2005, Volume 4, pages 554 to 559, lines 13 to 16.

- Essentially, a better discussion of the potential negative social effects on Baker Lake community as well as the potential effects of hiring from the greater Kivalliq region, including Chesterfield Inlet.

6.9 Traditional Knowledge

- Better discussion of the use of Traditional Knowledge in reaching conclusions in the Final EIS, particularly with regard to the impact of the road on Baker Lake, and the impact of the project on other Kivalliq communities (concerns regarding the lack of jobs for Chesterfield Inlet and Rankin Inlet, and the issue of off-loading fuel and shipping up the river from the Chesterfield Inlet area).

7. CONCLUSIONS OF THE BOARD

The venues for the Final Hearing are Baker Lake, Chesterfield Inlet, and Rankin Inlet. The Board sees no reason to expand the list of parties or interveners. The dates for the Final Hearing will be set once further information, including the Final EIS, are received from the Proponent.

Subject to permission from Cumberland, weather restrictions and so on, the Board will schedule a site visit as part of the Baker Lake venue. The Board also reserves the right to schedule another Technical Meeting to deal with issues arising after the Final EIS is filed, especially with respect to the all-weather road.

In order to facilitate scheduling of expert witnesses, primary technical presentations will take place in Baker Lake and the Final Hearing agenda will be organized by specific technical topics. All parties are required to ensure sufficient technical expertise is available at Chesterfield Inlet and Rankin Inlet to respond to technical issues arising from consultation with these communities.

Subject to direction from the Minister, the all-weather road is included in this Part 5 review. To do otherwise would be inconsistent with the Board's mandate under the NLCA, result in undesirable project splitting and be inconsistent with precedent. The Final Hearing on the all-weather road will not take place until the NPC releases a positive Conformity Decision, or Cumberland otherwise receives an exemption from the Minister.

The Board believes Cumberland will resolve most of the parties' outstanding concerns by complying with the EIS Guidelines, its Conformity Submissions and by implementing the 107 items set out in Appendix 1. In addition to the commitments set out in Appendix 1, and to give portions of that list emphasis, the Board has set out specific issues related to wildlife, fisheries and aquatics, waste rock and tailings management, climate change, the all-weather road, shipping and marine, socio-economics and traditional knowledge, **to which Cumberland is expected to respond**. Cumberland is particularly encouraged to respond directly to the socio-economic issues that have arisen over the course of the Technical Meeting and the PHC.

Cumberland bears the burden of meeting NIRB's information requirements, and accordingly the Board declines to set out a process or precise schedule for Cumberland's submissions. However, the Board believes that a timely exchange of technical information between Cumberland and the parties *prior* to the preparation of the Final EIS is essential to ensure the Final EIS will meet NIRB's requirements. Therefore, the Board requests that Cumberland inform the Board of the dates when that Appendix 1 information will be released.

Signed this _____day of July, 2005.

_____

Albert Ehaloak
Acting Chairperson

APPENDIX 1– CUMBERLAND RESOURCES LTD. COMMITMENTS

Technical Meeting June 2 and 3, 2005 – Baker Lake, NU

Note: All commitments made are to be reflected in the Final Environmental Impact Statement (FEIS), unless otherwise stated

Commitments

General

1. All new information given in Technical Meeting presentations will be included in FEIS

Project Design related

2. Provide finalized detailed mine plan and schedule to include revisions to pit designs and any changes to dike alignments
3. Indicate predicted mine life of tailings dam
4. Provide updated closure schedule for dike breach and estimated location of breach
    a. ACRES: Provide summary and include statements in the FEIS on the dike reclamation after the mine closure, how and which of the dikes will be removed or breached, and its justificaitons
5. Include revised wording for the elimination of options
6. Provide a statement regarding closure ditch designs
7. Discuss details of infrastructure disposal during closure
8. Provide more detail (including location and characteristics) of explosives mixing plant, ammonium nitrate storage, and magazines, including quantities and distances to vulnerable features
9. Provide information regarding sewage and solids waste management. The FEIS will also provide information regarding the volume of camp sewage that will report to the Tailings Impoundment Area (TIA) in order to address why sewage inputs were not included in water quality modeling for the TIA.
10. Provide mineral reserve numbers
11. Provide a figure with a cross-section through each pit and combine the figures on one sheet
12. Include all elevations and scales on any drawings and cross-sections in FEIS
13. Provide clearly labelled and updated figure of all project components

Permafrost

14. Include up-to-date raw thermistor data and geothermal modelling
15. Include updated map showing locations of thermistors

16. Include the bathymetry of project-associated lakes
17. Annotate the permafrost cross-section with thermistors, showing depth and location of proximal thermistors
18. Provide statement in FEIS on monitoring Tailings freezeback
    a. Rationale to be provided for monitoring program

Groundwater

19. Provide location of groundwater monitoring wells onto maps
    a. Provide revised water balance calculations
20. Provide the characterization (hydraulic conductivities) of the fault running through the tailings area, including drilling data and results and reference this into the FEIS
21. Provide hydrogeological modelling assumptions and results, including those pertaining to fault feature
22. Provide open pit stability assessment
23. Verify quantities and geochemistry of lake sediment and how these results are used in determining disposal of lake sediment
    a. CRL to identify the locations of potential disposal sites, and provide existing data on the locations where the samples were taken
24. All technical data, including analytical results, figures, tables and information sources used in groundwater assessment to be referenced in FEIS
    a. CRL to provide details of post operational groundwater flows between 2nd and 3rd Portage Lakes, including flow directions and water chemistry into the Portage and Goose Lake pits

Mine Waste, Tailings Dikes and De-watering Dikes Alternatives

25. Terrain maps for project site – to be provided to parties as soon as possible
26. Provide clarification regarding the decision matrices for the Portage Waste Rock pile and Tailings Impoundment Area (as it relates to the possible effects on all affected fish-bearing lakes) – to be provided to parties as soon as possible
    a. The rationale for selecting the various factors, sub-indicators, relative weightings and the ranking of the various options needs to be supported with scientific evidence. The various options need to be clearly described with supporting rationale for each component of the option
27. Provide clear rationale for locations of east dike and westerly portion of Goose Island pit. Clarify location of South Camp dike.
28. Provide confirmation of the capacity of the tailings impoundment area to provide for extra volume needed for ice entrapment potential, use for lake sediment disposal and future mine expansion.
    a. CRL will clarify the source of till for the construction of the East dike, the construction stage at which Ultramafic (UM) rock will be

placed on the dikes, whether the placement of UM rock can be used to isolate the work area, and the level to which the UM will be placed in the context of the range of water levels in 2nd and 3rd Portage Lakes

b. Option to deepen and widen the connecting channel between 2nd to 3rd Portage Lake needs to further consider impacts to fish populations, at what time the channel will be altered (in the context of dewatering pit and tailings areas), whether this will achieve the desired result, and whether the upstream invert of the connecting channel will reduce water levels in 3rd Portage Lake as a result of construction or potential failure during operation and closure. The alternate options to discharge excess water needs to be considered
c. The impact of reduced flows in downstream channels will address the continued ability of fish to access upstream habitat during the period of refilling the pits, particularly during spring freshet
d. An analysis of the long-term stability of the East dike and tailings dams will be provided to address the risk of failure beyond closure

Geochemical Program and Water Quality

29. Provide a rationale for monitoring plans for groundwater and permafrost
30. Show location of reference lakes and cross reference as appropriate
    a. Show locations of reference lakes outside the mine area, where baseline data were collected, and include this figure in the FEIS
31. Include a discussion of mitigation measures for the potential effects of the fault under tailings dike (i.e. possible grouting, and/or artificial freezing) in FEIS within the context of groundwater modelling during operation and post-closure period
32. All data and results from geochemistry, including water quality predictions, will be provided as soon as possible and will also be included in FEIS
    a. Provide details of different rock lithologies (mineralogy, geochemistry, Acid Rock Drainage (ARD) and Metal Leaching (ML) potentials). Detailed sulphide and carbonate mineralogy, including heterogeneity in UM rocks to assess impact of capping Potentially Acid Generating (PAG) and ML rocks
33. Further document sensitivity results on water quality predictions. Provide ranges of predicted concentrations
34. Provide the updated Whole Lake Water Quality Predictions
    a. Provide the updated Whole Lake Water Quality Predictions, including areas within/along created fish habitat and the degradation time to an acceptable level in the FEIS
    b. Provide the updated information on “whole Lake Water Quality Predictions”, which contains references and analyses, including detail modeling on the diffusion of metal leachate concentrations as water is flowing out from dikes

35. Provide information regarding the volume of camp sewage that will report to the Tailings Impoundment Area (TIA) in order to address why sewage inputs were not included in water quality modeling for the TIA
36. Include information on the timing and multistage pumping of dewatering as possible mitigation measures to help address Total Suspended Solid (TSS) levels
37. Provide long term post closure groundwater flows, pit lake stratigraphic, and chemistry analysis
38. Provide inflow modeling to determine groundwater inflow quantity and Total Dissolved Solids (TDS) concentration during mine operation to NRCan
39. Provide the 'Mine Site Water Quality Modelling Predictions' report, including static and kinetic test modeling assumptions/justifications
    a. Provide 'Mine Site Water Quality Modeling Predictions' information, which includes static and kinetic test modeling assumptions/justification. Detailed information on initial test results and their utilization fact to justify reduced concentrations due to channelling (hydrology), particle size distribution, climate, tailings disposition plan
40. AVS (Acid Volatile Sulfides) and SEM (Simultaneously Extractable Metals) studies have been completed and results will be provided
41. The FEIS will include a discussion as to why processed ore toxicity data is not presented.
42. Clarify the operational plan for the handling and control of the PAG waste
43. Provide case histories to support PAG waste management option
44. Provide a materials balance showing available waste rock types (UM, IV, IF/PAG, non-PAG) versus volumes of disposal in waste rock pile and volumes needed for construction of various mine components. If waste rock is going to a waste rock pile, indicate which pile
45. Provide maps indicating locations of samples for PAG rock determination in FEIS
46. Include the schedule and process by which attenuation pond water from 2nd Portage Lake area would be moved (in year 5) to Goose pit
47. Identify the revised size of Portage Waste rock pile considering that portion of waste rock being moved to Goose pit and confirm that fish-bearing waters will not be impacted
48. Provide regulatory criteria used to identify PAG rock
49. Clarify the circumstances under which quartzite will be used as aggregate, including options for mitigating any impacts from the inclusion of this PAG material
50. Provide information on how the freezing of the tailings impoundment takes into account the groundwater inflow
51. Provide case histories on exothermic reactions and their effect on tailings freezing
    a. Provide sulphide mineral content of tailings
52. Provide cyanide storage and transport details

53. Provide more detail on adaptive management and monitoring in relation to Vault waste rock pile
    a. Provide statement that the Vault waste rock disposal area is not expected to require a capping layer above the waste rock after mine closure, due to its current evaluation of favourable rock chemistry. However, monitoring will be carried out in the Vault waste rock piles throughout the mine operation
54. Include information / sensitivity analysis regarding how extreme events and above normal lake levels could impact the GoldSim water balance graphs, to ensure that the design and impact assessment takes extreme events into consideration
55. CRL to provide the reference document showing baseline water quality in the various lakes, including location, time and sampling of the water for chemical testing
56. Additional geothermal modelling to be carried out and provided to parties as soon as possible. General agreements include:
    a. Global warming attenuates to zero change at 100 years
    b. The 4.4 degrees C variation between MAAT and MAGT is unrealistic to model
    c. Will use variation in the magnitude of predicted climate change within the 100 year period so as to provide a broader range of geothermal effects. The range consider accepted climate change predictions.

Wildlife and Terrestrial

57. Update Ecological Land Classification surveys to reflect the concerns of interveners, particularly with respect to ground-truthing
58. Update wildlife Cumulative Effects Assessment including expanding the Caribou Regional Study Area (RSA) to include winter ranges in northern Manitoba and Saskatchewan
59. Describe environmental health monitoring, including methodology for collecting baseline data for screening level risk assessment for terrestrial animals and country foods
60. Update wildlife monitoring plan
61. Provide rationale for not doing waterbird surveys along Tehek-Quoich-Lunan rivers
62. Clearly describe methods used to determine high, moderate or low suitability habitat for each wildlife VEC
63. Assess impacts of mine-related disturbance on wildlife and the effect on habitat effectiveness
64. Provide supporting documentation related to impact assessment methodology
65. Update Local Study Area (LSA) and RSA boundaries, including:
    a. The change to RSA to reflect the new access road

   b. Expanded LSA around Vault area encompassing both the original LSA areas
   c. Defined LSA for the all-weather road
66. Assess wildlife and terrestrial baseline conditions along access road and conduct overall impact assessment
67. Assess impact of quarry and borrow sites on wildlife and terrestrial VECs
68. Provide mitigation measures and protocols related to problem wildlife
69. Provide the aerial wildlife sampling survey methodologies as soon as possible and reference in the FEIS

Aquatic

70. Make appropriate comparisons to drinking water guidelines in tables referring to water quality
71. Explicitly describe frequency of effluent toxicity testing under MMER
72. Provide discussion relating to the concern of introduction of TSS into 3rd Portage Lake from 2nd Portage Lake during dewatering. If necessary, also provide the mitigation plans
73. Clarify the methodology and rationale for habitat mapping and quantification and compare to other mines e.g. Ekati and Snap Lake
    a. The relative advantages and disadvantages of the fish habitat model will be compared to other Northern mining projects models such as EKATI, Diavik and Snap Lake. The Proponent will incorporate indicators of productivity (I.e. CPUE), where appropriate, in support of the fish habitat model. The fish habitat model will incorporate species- and life-stage specific differences for all fish species in the project-affecte waterbodies into the fish habitat model. Specifically, the model will account for habitat requirements of rare species such as burbot, stickleback and sculpin
74. Provide results of all fish studies conducted along the all-weather road route, including the assessment of possible increased fishing pressure on the lakes near the road in FEIS
    a. Provide results of all fish studies (using appropriate sampling times and techniques) conducted along the all-weather road route, including the assessment of possible increase fishing pressure on the lakes near the road
75. Provide account for residual habitat loss in the following areas:
    a. in smaller areas like Phaser Lake
    b. extended airstrip
    c. small fish bearing ponds (if any)
    d. Baker Lake barge landing facility
        i. All fish habitat, regardless of relative value, will be included in the calculations of losses and gains of fish habitat. Improving access to Third Portage Lake will further consider implications on existing fish populations in those lakes.

Compensation associated with the proposed TIA, if justified, will be presented separately. A contingency plan will be developed for fish habitat enhancements due to failure and/or delays in the FEIS. DFO will provide Cumberland with DFO perspective on what has worked/not worked at other mines in the NWT (e.g., Ekati, Diavik) to “avoid reinvention of the wheel”

76. Provide more information based on recent literature research regarding intra-species habitat utilization of project lakes
77. Provide thresholds and explanation for the level of change in sediment chemistry that would justify the collection of benthos to monitor contaminant
78. Provide literature review and discussion related to water column oxygen concentration during winter and indicate how late winter sampling will be conducted in 2006
79. Provide further detail on water treatment technologies (AMEC)
80. Provide more background information on the potential change in trophic level from nutrient discharge in effluent
81. Identify particular areas along shoreline of 3rd Portage Lake that might be at risk from slumping during de-watering of 2nd Portage Lake
    a. Identify particular areas along shoreline of 3rd Portage Lake that might be at risk from slumping during dewatering of 2nd Portage Lake to improve impact prediction and mitigation measures during higher than anticipated years. Impact of increased flows on downstream areas of Second Portage Lake to be addressed
82. Account for habitat loss in Phaser Lake as a result of 1m drop in water level
83. Update maps to reflect the one intake pipe
    a. The Proponent will identify the location for the freshwater intake pipe to service the mine throughout the operations, and will ensure the location avoids sensitive fish habitat
84. Cumberland will double check if lake bed sediments will be used in construction of the core of the dikes and if so, this will be stated in FEIS
85. Ensure that the blast management plan in the FEIS accounts for DFO addendum relating to blast design during periods when water bodies are ice covered
    a. A Blast Design Report will be submitted, taking into account the DFO addendum relating to blast design during frozen conditions
86. Committed to make sure that intake pipe is located away from any sensitive habitat
87. The ultimate fate of salvaged fish from project-affecte waterbodies will be presented and incorporate the DFO Fish-Out Protocol adjusted for the project and the wishes of Baker Lake residents
88. The results for all past aquatic studies, including sampling methodology, time, dates, and locations to allow the determination of additional sampling of lower trophic levels required for 2005 and beyond that is

required to provide an adequate understanding of the natural variability in support of monitoring of project-related impacts during construction, operation and closure

89. The results from the 2004 and 2005 aquatic baseline sampling program will be incorporated into the integrated aquatic baseline data. Fish passage/movement in project-affected watercourses, the identification of limited or life-stage specific habitat types (spawning) and the confirmation of other fish species (i.e. Arctic grayling, burbot) will be further sampled using various sampling techniques (minnow traps, seines, etc) conducted at appropriate times of the year, in support of impact prediction and the No-Net-Loss plan
90. CRL will clarify that char do occur upstream of the falls
91. Fisheries surveys for Phaser Lake, NF-1 and the associated connecting channels will be conducted to determine species presence, abundance and habitat function. Project-affected watercourses in the barge landing facility, with the potential to support fisheries, will be sampled. All surveys will be conducted at appropriate times of the year to take advantage of any potential spring-spawning fish or migration of fish during spring freshet

Socioeconomics

92. Southern point of hire will be identified
93. Workforce requirements relative to regional human resource inventory will be incorporated into assessment of employment effects
94. Migration effects will be re-examined
95. The Nanisivik experience will be reviewed and referenced
96. To the extent possible, progress on the IIBA will be integrated into socioeconomic mitigation section
97. Criteria for decommissioning the road and the approach to consultations on the road closure decision will be included in the FEIS
98. Socioeconomic impact assessment will include recent project changes
99. Potential effect of project on persons already employed in the Kivalliq region will be elaborated on
100. Clarification on treatment of youth as a VSEC will provided in the FEIS
101. The FEIS will provide additional documentation on consultation results

Air and Noise Quality

102. Provide update on installations of two multiple particulate samplers to measure particulate concentrations at the project site
103. Provide detailed reporting protocol for air quality monitoring and management program
104. Address conceptually the potential for dust from tailings resulting from extreme wind

105. Indicate commitment to performing at least 2 days of sound level monitoring per year
106. Detail potential mitigation measures that may need to be implemented with regards to results from ambient disbursement noise monitoring at North Camp

Additional Requests:

1. Provide topographic data on Northwest Arm of the Third Portage Lake

APPENDIX 2 – LIST OF EXHIBITS

1. Meadowbank Project Introductory Baker Lake PHC Presentation - hardcopy
2. Meadowbank Project Permafrost Baker Lake PHC Presentation– hardcopy
3. Meadowbank Project Geochemistry Baker Lake PHC Presentation– hardcopy
4. Meadowbank Project Fisheries and Aquatic Studies Baker Lake PHC Presentation – hardcopy
5. Meadowbank Project Terrestrial Baker Lake PHC Presentation – hardcopy
6. CD containing Cumberland Resources Ltd. Technical Meeting and Baker Lake PHC Presentations
7. Comments from Parties (Cumberland, INAC, DFO, KIA, Acres) on Draft List of Commitments – hardcopy
8. NTI/KIA Baker Lake PHC Presentation – hardcopy
9. DFO Baker Lake PHC Presentation – electronic and hardcopy
10. Acres PHC Presentation – hardcopy
11. INAC Baker Lake PHC Presentation – hardcopy
12. NRCAN Baker Lake PHC Presentation – hardcopy
13. CD containing Cumberland Resources Ltd. Chesterfield Inlet PHC Presentation
14. NTI/KIA Chesterfield Inlet Presentation
15. NRCan letter to Stephanie Briscoe dated June 8, 2005 Re: NRCan Comments on Draft List of Commitments
16. Marian Jackson's List of Five Questions for Cumberland presented at Chesterfield Inlet
17. INAC Chesterfield Inlet PHC Presentation
18. KIA/ NTI Rankin Inlet PHC Presentation
19. KIA/NTI Closing Statement
20. INAC Rankin Inlet PHC Presentation
21. INAC Closing Statement
22. DFO Rankin Inlet PHC Presentation
23. DFO Closing Statement
24. Cumberland Resources Ltd. Revised List of Commitments