ENVIRONMENTAL IMPACT REVIEW BOARD

May 25, 2012

GNWT
Department of Transportation
Lahm Ridge Tower
2nd Flr, 4501 - 50 Ave
P.O. Box 1320
Yellowknife, NWT X1A 2L9

Attention: Jim Stevens

Dear Mr. Stevens,

Directives to the Developer regarding the Review of the HAMLET OF TUKTOYAKTUK, TOWN OF INUVIK AND GNWT - CONSTRUCTION OF THE INUVIK TO TUKTOYAKTUK HIGHWAY, NORTHWEST TERRITORIES [02/10-05]

On May 10, 2012 the Environmental Impact Review Board (EIRB or Review Board) met in Inuvik to assess all of the evidence filed to date by the Developer, the Parties and the public in relation to the Inuvik to Tuktoyaktuk Highway (ITH) development proposal. Following the completion of the two IR processes and its assessment of the nature and quality of the information on the Record, the Review Board has decided to defer the Public Hearings to enable the Developer to file evidence that addresses a number of critical gaps that remain in the Draft EIS and on the Record.

On May the 10th, the Review Board assessed progress toward completion of the Environmental Impact Statement (EIS) by the Developer in response to the Terms of Reference for the EIS[1]. Decisions about the next steps in the review process were also made based on the Review Board's assessment of the information on the Record to date. The Review Board appreciates the work the Developer and other Parties have done in responding to the IRs, and recognizes that much new information has been provided. As you are aware, the Draft EIS (which includes the supplementary information filed by the Developer to date) has not yet been accepted as complete and in conformity with the Terms of Reference. In the Review Board's assessment, critical components of the Terms of Reference remain unsatisfied. Reasons for this decision are set out below.

[1] Issued by the EIRB on November 3, 2010

In order to complete the Review, the EIRB issued a series of Directives which the Review Board anticipates that the Developer will respond to by September 7, 2012. If the Developer is unable to file sufficient evidence to complete the Draft EIS and be in conformity with the Terms of Reference by September 7, 2012, the Review Board will be forced to consider further adjourning the process until the outstanding information can be provided.

Reasons for Decision

1. Information considered critical to the understanding and determination of impacts that may potentially be caused by the development, for designing and determining the effectiveness of proposed mitigation measures, and for designing any follow-up monitoring programs, is still outstanding. The Developer has acknowledged this by making a series of commitments to provide critical information about biophysical baseline conditions. This information is promised in the results of the studies set out in Table 1 (attached as Appendix 1).

2. A number of important Plans have been identified by the Developer as being required to satisfy the regulatory process. Many of these Plans will include protocols and guidelines to be followed by the Developer and/or sub-contractors to reduce, eliminate, and avoid potential environmental impacts. Although the Review Board recognizes that for many of these Plans specific detail is only required at the regulatory stage, a general understanding of the purpose, intent and workings of the Plans is necessary for the Review Board to determine the contribution of the Plans to mitigation of the impacts of the proposed development. The Developer has promised that the mitigation of certain impacts would be detailed in these Plans, yet for the purposes of this Environmental Impact Review the details required to understand the implementation and workings of these mitigation measures are presently incomplete. Therefore, there is currently an unacceptably high degree of uncertainty associated with the mitigation measures associated with the Plans proposed by the Developer. The Developer's commitments for preparing Plans are outlined in Table 2 (attached as Appendix 2).

3. With respect to Round 2 IRs (numbers 90 to 96) on permafrost, ground ice, climate change and the use of granular resources for the construction and long term maintenance of the ITH, the Developer provided some useful preliminary information. However, based on the Developers responses to these IRs, additional questions have been raised regarding the uncertainty associated with the estimated aggregate needs for construction, on-going regular and future maintenance, and uncertainty about where the granular resources will be obtained, including the location of pits to be developed, access roads, and how much resource will be extracted from each pit. Additional information is required as detailed in the attached IRs (attached as Appendix 3).

4. Canadian census information for 2011 and recent information from the GNWT Bureau of Statistics and from the Inuvialuit Regional Corporation (IRC) is available, and should be used to update socio-economic baseline information, impact predictions and mitigation measures where applicable.

5. Predicting the potential impacts on: regional and local economies, traditional and subsistence economies, human health and community wellness, socio-cultural patterns, harvesting, and land-use requires an understanding of the changes in and potential development impacts on biological resources of interest to Inuvialuit and communities. Baseline information for many biological resources of interest will only become available in August 2012. Therefore, there is currently an unacceptably high degree of uncertainty associated with the impact predictions in the Draft EIS for Inuvialuit and local resource use.

6. A portion of the proposed ITH is located on Category E lands, as identified in the Community Conservation Plan (CCP) for Tuktoyaktuk. The Category E designation in the CCP affords the highest level of protection to those lands, and suggests that development should not occur in these areas. The Developer has not provided evidence demonstrating that the affected community and community organizations accept the use of these Category E lands for the ITH.

Legal Responsibilities for Conducting the Review

The EIRB is conducting a substituted Review process and is therefore required to satisfy the requirements of the Inuvialuit Final Agreement (IFA, s. 8, 11, 13) and the *Canadian Environmental Assessment Act* (CEAA, s. 16). The information required by the EIRB to meet these requirements was clearly identified to the Developer and to all Parties in the Terms of Reference for the Environmental Impact Statement (EIS) and in correspondence to the Developer since the Terms of Reference were issued. The additional information required from the Developer is, in the Review Board's view, necessary to satisfy these legal requirements.

Review Process to Date

The Review process has completed several important steps since the Terms of Reference were issued in November 2010. These steps include the submission of a Draft EIS by the Developer (May 2011), a Conformity Analysis of the Draft EIS against the Terms of Reference (May 2011 to December 2011), and the completion of two rounds of Information Requests (IRs) generated by the Review Board and the Parties (January 2012 to May 2012). The Review Board anticipates timely completion of its process once the information required and set out below is provided.

Directives to the Developer

The Developer is directed to provide the following information to the Review Board on or before September 7, 2012:

1. The Developer will provide to the Review Board printed and digital copies of draft and final reports identified in Table 1 as soon as they are available.

2. The Developer will, on the basis of the new information in the reports identified in Table 1, re-examine all impact predictions and indicate where any initial predictions should be changed and where such a change is made explain it and indicate whether the newly predicted impacts are significant or not. The Developer will identify and explain how proposed mitigation measures have changed, or any new mitigation measures have been developed, based on the new information. Where impact predictions have changed based on the new information, the Developer will identify and explain how the mitigation measures may have changed.

3. The Developer will provide for each proposed Plan identified in Table 2 sufficient information on the Plan details to enable the Review Board, in conducting its review of the Plans, to understand and evaluate the effectiveness of their contribution to the mitigation of impacts predicted in the EIS.

4. The Developer will provide the information requested regarding permafrost, ground ice, climate change and the use of granular resources (quality, quantity and location), as set out in the attached IRs as soon as possible.

5. The Developer will update the socio-economic impact assessment with 2011 Canadian census data and any new information available from the GNWT Bureau of Statistics and the IRC. The Developer will identify where any impact predictions and proposed mitigation measures have changed as a result and provide any necessary explanations.

6. The Developer will re-evaluate the impacts and proposed mitigation for any valued socio-economic component based on the information gathered and provided in the Traditional Knowledge and Traditional Land Use report. The Developer will also re-evaluate the impacts and proposed mitigation for any valued socio-economic component that would be affected by changes to the biological components where baseline information will only become available in August 2012.

7. The Developer will provide evidence and records of discussions with the affected community and community organizations that confirms that the use of these Category E lands for the ITH is acceptable. Failure to provide this information could force the Review Board to ask the Developer to provide information on an alternative routing that would avoid the Category E lands along the current preferred ITH alignment.

8. The Developer will provide a cross reference of the existing Draft EIS and all supplementary information filed to date, and any new information filed in response to this Directive, with the requirements of the Terms of Reference for the EIS, and also clearly demonstrate/justify how the Terms of Reference have been satisfied by the information.

Schedule for the Review

Following the May 10, 2012 meeting of the Review Board, the following schedule has been approved for the completion of this Review.

Date	Review Process Action	Responsibility
September 7, 2012	Final date for submission of outstanding information requirements.	**Developer**
September 8 – October 2, 2012	Review and analysis of information on the Record.	**Review Board and Parties**
October 3, 2012	Submission to the Review Board of list of outstanding issues, based on review of information on the Record.	**All Parties**
October 16 – 18, 2012	Technical Sessions, Inuvik	**Review Board Staff, Parties, Developer**
November 9, 2012	Filing of Final Technical Submissions by Parties, including Power Point presentations for the Public Hearings.	**Parties**
November 16, 2012	Submission of Reply to Final Technical Submission by Developer, including Power Point presentation for the Public Hearings.	**Developer**
November 22, 2012	Prehearing Conference	**Review Board Staff, Parties, Developer**
November 29 – 30, 2012	Public Hearings, Tuktoyaktuk	**Review Panel, Parties, Developer, Public**
December 3 – 4, 2012	Public Hearings, Inuvik	**Review Panel, Parties, Developer, Public**
December 14, 2012	Final Written Submissions of the Parties.	**Parties**
December 21, 2012	Final Written Submission by the Developer.	**Developer**
December 22, 2012	Close of ITH Record and Review Registry (EOR)	**Review Panel**
March 22, 2013	Issue Review Panel Report.	**Review Panel**

Please contact Eli Nasogaluak at (867) 777-2828 if you have any questions regarding this letter.

Sincerely,
Environmental Impact Review Board

Elizabeth Snider,
Chair, EIRB

APPENDIX 1

Developer Commitments to Provide Additional Information

Appendix 1 – Developer Commitments to Provide Additional Information

Table 1 – Developer Response to IR-15 Round 1

Program	Activity	Timing	Application of Information
Traditional Knowledge / Traditional Land Use	Final Report	April 30, 2012	Used in field survey planning. Used in mitigation confirmation and construction phase Wildlife Mitigation and Monitoring Plan. Supports Navigable Waters application.
Vegetation Baseline	Vegetation cover and rare plant field surveys and sampling	June 2012	Used in vegetation mapping and to confirm EIS vegetation typing. Used in final design and mitigation determination.
Draft Report including vegetation cover map at 1:20,000 and rare plant occurrences	Draft Report vegetation	August 15, 2012	Used in final design and mitigation implementation Used in wildlife habitat mapping
Vegetation Baseline	Final Baseline Report including vegetation cover map at 1:20,000	August 31, 2012	Used in final design and mitigation implementation. Used in mitigation / compliance monitoring.
Wildlife and Wildlife Habitat	LSA features relevant to wildlife	March 31, 2012	Used in refining construction phase wildlife mitigation and monitoring plan. Used in design and implementation of habitat mitigations.
Wildlife and Wildlife Habitat	Spring waterfowl staging survey	May 2012	Used in refining construction phase wildlife mitigation and monitoring plan. Used in design and implementation of habitat mitigations.
Wildlife and Wildlife Habitat	Breeding waterfowl survey	June 2012	Used in refining construction phase wildlife mitigation and monitoring plan. Used in design and implementation of habitat mitigations.
Wildlife and Wildlife Habitat	Breeding passerines/shorebirds survey	June/July 2012	Used in refining construction phase wildlife mitigation and monitoring plan. Used in design and implementation of habitat mitigations.
Draft Report including wildlife, key wildlife habitat features and observations map at 1:20,000	Draft Report	August 15, 2012	Used in design and implementation of species mitigations Used in refining Construction Wildlife Mitigation and Monitoring Plan
Wildlife and Wildlife Habitat	Final Baseline Report	August 31, 2012	Used in refining construction phase wildlife mitigation and monitoring plan. Used in mitigation/compliance monitoring.
Wildlife and Wildlife Habitat	Raptor nest survey	June 2012	Used in design and implementation of habitat mitigations.
Engineering	Right of way surveys	July/August 2012	Used in implementation of mitigations

Program	Activity	Timing	Application of Information
Engineering	Bridge design	July 2012	Design and implementation of habitat mitigations
Water source studies	Bathymetric mapping of proposed water sources	June 2012	Supports Water Licence application and construction planning.
Water source studies	Assessment of allowable withdrawal quantities per source	July 2012	Supports Water Licence application and construction planning.
Terrain and Geotechnical	Winter geotechnical drilling, sampling and lab testing of portions of 9 borrow sources to confirm the extent, quantity and quality of materials.	March – October 2012	Supports project planning and design, costing. Supports Pit Development Plans for Quarry Permits

APPENDIX 2

Developer Commitments to Provide Plans

Attachment 2 – Developer Commitments to Provide Plans

Table 2 – Developer Response to IR-67(1 & 2) Round 1

Plan	Details	Completion Date
Spill Contingency Plan	The Developer will require that Project contractors prepare spill contingency plans outlining spill containment, and clean-up. These will be completed by the contractor(s) at least three months prior to the start of construction.	October 2012
Health and Safety Plan	The Developer commits to ensuring that its contractor(s) have Health, Safety and Environment (HSE) manuals, work procedures documents and site specific health and safety plans. The Developer or its contractor(s) will develop Project-specific Bear Safety Guidelines and will educate staff accordingly including the proper use of non-lethal wildlife deterrent materials (e.g., bear spray). These will be completed by contractor(s) at least three months prior to the start of construction.	October 2012
Hazardous Waste Management Plan	The Developer and/or contractor(s) will develop a hazardous waste management plan (HWMP) as part of land use permitting applications to the ILA and AANDC. The HWMP will encompass all pre-construction and construction phases of the Project and will apply to the Developer and all Project contractors involved in receiving, transferring and transporting hazardous waste for the Developer's activities.	September 2012, or as specified by the regulator
Waste Management Plan	The Developer and/or contractor(s) will develop a waste management plan for all wastes associated with preconstruction and construction activities as party of land use permitting applications to the ILA and AANDC. The waste management plan will apply to the Developer and all associated Project contractors involved in the generation, treatment, transferring, receiving, and disposal of waste materials for the Project.	September 2012, or as specified by the regulator
Erosion and Sedimentation Control Plan	The Developer and/or contractor(s) will provide an erosion and sedimentation control plan to the ILA and AANDC as part of land use permitting.	September 2012, or as specified by the regulator
Fish and Fish Habitat Protection Plan	The Developer will develop and implement a fish and fish habitat protection plan in consultation with DFO that will include mitigation measures and adherence to Operational Statements or other direction by DFO.	September 2012, or as specified by DFO
Wildlife and Wildlife Habitat Protection Plan	The Developer will develop and implement a wildlife (i.e., mammals and birds) and wildlife habitat protection plan in consultation with GNWT ENR, Environment Canada, WMAC, and HTCs.	September 2012
Archaeological Site(s) Protection Plan	The Developer will prepare and implement an archaeological site(s) protection plan to facilitate the continued protection and management of archaeological	October 2012

Plan	Details	Completion Date
	resources during the construction phase of the Project.	
Pit Development Plan	The Developer will provide pit development plans, phased over three years, to the ILA and AANDC as part of the quarry permitting process.	September 2012 (first plans)

APPENDIX 3

Additional Information Requests

Attachment 3 – Additional Information Requests

IR Number: **147**

Source: **EIRB**

To: **Developer** (GNWT, Hamlet of Tuktoyaktuk, and Town of Inuvik)

Subject: **Estimates of Required Gravel Resources**

Preamble

Tables 2.2-1 and 2.5-1 on pages 46 and 60 of the EIS indicate that a total of 4.75 million m^3 of gravel will be required to build the road. In response to IRs 90 and 92 Round 2), the developer presented Tables 1 and 2 on p. 4 and p. 8 of the response, and summarized on p. 27 that the total gravel required for maintenance and rehabilitation was 3,355,500 m^3 of borrow excavation and 1,216,390 m^3 of crushed aggregate. The total is 4.57 million m^3.

Request

1. Please confirm that the estimate for total gravel required over the first 50 years of the project is 4.75 + 4.57 = 9.32 million m^3.
2. Please indicate the precision of this estimate in per cent (%), including the precision in the requirement for construction and in the requirements for maintenance and rehabilitation.

IR Number: **148**

Source: **EIRB**

To: **Developer** (GNWT, Hamlet of Tuktoyaktuk, and Town of Inuvik)

Subject: **Terrain Analysis**

Preamble

The Review Board has noted the terrain analysis report filed by the Developer on March 14th, 2012. The report states (p. 5-30) that "the results of the terrain mapping should be considered preliminary and resulting from a desktop study. Detailed field investigations should be carried out to support this effort." The report makes over 65 recommendations regarding adjustments to the route alignment of the proposed highway (p. 3-19 to 3-22).

Request

1. Please provide details on field investigations conducted since March 2012 regarding the recommended adjustments to the alignment.
2. If field investigations have not been conducted at sites recommended for adjustment, please indicate, on a site-by-site basis, the reasons for not studying these locations.
3. If a field program for these sites is scheduled for summer 2012, please indicate the date by which a report on this program will be filed with the Review Board.

IR Number: **149**

Source: **EIRB**

To: **Developer** (GNWT, Hamlet of Tuktoyaktuk, and Town of Inuvik)

Subject: **Sensitive Terrain**

Preamble

The terrain analysis report filed by the Developer on March 14th, 2012, is largely derived from interpretation of aerial photographs. The report identifies few ice wedges or bodies of massive ice on hillslopes. The report indicates areas where massive icy bodies may be expected.

Request

1. Please indicate on a map the location of expected massive icy bodies beneath the proposed highway alignment, or terrain containing massive ice, including both sheets of tabular massive ice and the locations of ice wedges on hillslopes.
2. In the absence of this information, please quantify the increased requirements of aggregate for construction, maintenance, and rehabilitation along the whole route, given the need for a higher embankment in such terrain and the necessary assumption that such massive ice is ubiquitous.

IR Number: **150**

Source: **EIRB**

To: **Developer** (GNWT, Hamlet of Tuktoyaktuk, and Town of Inuvik)

Subject: **Location of Gravel Resources**

Preamble.

In response to IR 92 (Round 2), the developer indicated (Table 2, p. 8; and Fig 1-1, p. 9) that a number of possible sources of borrow material are under consideration. These include: Inuvik Airport Quarry, Pit 312 at km 58, Pit 173 at km 82, Borrow areas 170, 305, 307, 312, 325, 245.

Request

1. Please indicate the borrow sources to be used by the project. If this information is not available at present, please indicate the date by which the information will be supplied to the Review Board.

IR Number: **151**

Source: **EIRB**

To: **Developer** (GNWT, Hamlet of Tuktoyaktuk, and Town of Inuvik)

Subject: **Quality of Aggregate Resources**

Preamble

The terrain analysis filed by the Developer in March 2012 states on p. 3-8 that "The texture of the glaciofluvial materials in the project area varies considerably but generally consists of silty to medium-coarse textured sand with variable amounts of gravel and pebbles" and that "bodies of massive ice are commonly associated with deposits of granular materials in the Mackenzie Delta." These statements indicate that the quality of the available aggregate is variable, and that more excavation of resources will be required than the volume used on the road.

Request

1. Please indicate the aggregate resources to be extracted from each of the borrow pits selected for use by the project.
2. Please indicate the volume of excavation at each pit as well as the volume of useable aggregate expected in the excavation. These estimates should be based on the results of geotechnical investigations conducted at seven borrow sources in March and April 2012 described in the response to IR 131.
3. Please file the geotechnical reports from these investigations with the Review Board.

IR Number: **152**

Source: **EIRB**

To: **Developer** (GNWT, Hamlet of Tuktoyaktuk, and Town of Inuvik)

Subject: **Developer's Use of Available Resources**

Preamble

The development will utilize a significant amount of aggregate in construction, maintenance, and rehabilitation. There are other requirements for aggregate in the region, notably for municipal purposes, and potentially for industrial development. The proportion of available resources that will be used by the project is an important consideration in the Environmental Impact Review.

Request

1. Please indicate the total aggregate resources in the region, within 20 km of the road alignment, between Inuvik and Tuktoyaktuk, both proven and potential.
2. In particular, please indicate the resources that are currently delineated and available for use by the communities of Inuvik and Tuktoyaktuk.
3. Please supply projections from the Town of Inuvik and Hamlet of Tuktoyaktuk for their foreseeable municipal requirements.
4. Please supply an estimate of the aggregate requirements for development of hydrocarbon resources in the vicinity of Parson's Lake. The time frame for these assessments should be 50 years, i.e. up to 2065.
5. Please indicate any potential developments, for example harbor improvements at Tuktoyaktuk, for which significant gravel resources may be required.