

**Mackenzie Valley Environmental Impact Review Board**

*Report of Environmental Assessment and Reasons for Decision*

**On**

**Imperial Oil Resources Ventures Ltd.'s**

**Deh Cho Geotechnical Program**

**(EA 03-009)**

**February 18, 2005**

**Mackenzie Valley Environmental Impact Review Board**

**Box 938, Yellowknife, NT. X1A 2N7**

**Phone (867) 766-7050**

**Fax (867) 766-7074**

**[www.mveirb.nt.ca](http://www.mveirb.nt.ca)**





## Review Board Environmental Assessment Decision

To make its decision in this Environmental Assessment, the Mackenzie Valley Environmental Impact Review Board (Review Board) has relied upon all the information on the Public Record. Having considered the evidence, the Review Board has made its decision in accordance with section 128 of the *Mackenzie Valley Resource Management Act (MVRMA)*.

It is the Review Board's opinion that without additional mitigation, the proposed development, considered as a whole, would be likely to cause significant adverse impacts on the environment. In order to prevent these significant adverse impacts, the Review Board has recommended a number of measures in this report.

The Board has concluded, pursuant to section 128(b)(ii) of the *MVRMA* that with the implementation of the measures recommended in this *Report of Environmental Assessment* and the commitments made by Imperial Oil Resources Ventures Ltd., the proposed development will not likely have a significant environmental impact or be cause for significant public concern and should proceed to the regulatory phase of approvals.



G.M. Loomis  
Acting Chairperson of the Mackenzie Valley  
Environmental Impact Review Board

February 18, 2005

## EXECUTIVE SUMMARY

The Mackenzie Valley Environmental Impact Review Board (“Review Board”) undertook an Environmental Assessment (EA) of Imperial Oil Resources Ventures Limited’s (“Imperial” or “the developer”) proposed Deh Cho Geotechnical Program. On February 12, 2004, the Review Board decided to conduct this environmental assessment on its own motion pursuant to subsection 126(3) of the *Mackenzie Valley Resource Management Act (MVRMA)*, on the basis of public concern about socio-economic and environmental impacts of the development.

Imperial proposes to investigate sub-surface conditions along the likely Mackenzie Gas Project pipeline route in order to more effectively assess the feasibility of any subsequent engineering and construction projects. The proposed work area is entirely within the Deh Cho region of the Northwest Territories, and runs approximately along the existing Enbridge pipeline right-of-way, 450 kilometers from the border of the Sahtu Settlement Area in the north to the Alberta border in the south. The proposed development activities include investigating sand and gravel borrow sites with boreholes, construction and operation of temporary work camps, drilling boreholes at proposed river crossings, and excavating test pits to assess sand and gravel quality. While most of the work would be conducted using already cleared access routes, some 10% (45 kilometers) of the access would require new clearing. Imperial estimates the geotechnical program will take approximately 75 days. Work would occur during the winter season only. Imperial has proposed to start the work in the winter of 2004/05.

In addition to analyzing all the written evidence on the Public Record, the Review Board held community meetings in Trout Lake (November 30, 2004) and Wrigley (December 1, 2004) and a public hearing in Fort Simpson on December 2, 2004. The main issues raised by parties to the EA were:

- Road safety due to increased industrial traffic;
- Concerns about specific sites of high value for local cultural and harvesting activities, such as the K’eotsee Lake watershed, the Blackwater River area, and a number of sites around Wrigley;
- Cultural, economic and wildlife disruption associated with the proposed development activities and reasonably foreseeable future developments;
- Community involvement in determining acceptable locations for, and the ongoing assessment of, the proposed geotechnical activities; and
- The lack of agreements governing access and benefits and harvester compensation between Imperial and affected first nations.

A review of the evidence on the public record has convinced the Review Board that:

- Public concern related to the Imperial Deh Cho Geotechnical Program and reasonably foreseeable future developments, largely the proposed Mackenzie Gas

Project, is evident. The Review Board attributes much of this public concern to the fact that the developer and the five first nation communities in proximity to the Imperial Deh Cho Geotechnical Program have been unable to establish relationships based on mutual trust and consistent and transparent communication. While public concerns are important consideration for both this and future developments, they have not reached the level of significance required for the Review Board to refer this development to an Environmental Impact Review.

- The Imperial Deh Cho Geotechnical Program as originally proposed would cause significant environmental impacts on:
  - Specific geographic locations around K'eotsee Lake, the Blackwater River, and around Wrigley;
  - Road safety on the Trout Lake winter road, Highway 1 and the Highway 1 winter road;
  - Wildlife, particularly disturbance to boreal (woodland) caribou and moose populations in the areas surrounding the Imperial Deh Cho Geotechnical Program; and
  - First nation communities situated along the proposed development corridor, with particular reference to cumulative social and economic impacts related to socio-economic impacts and harvester compensation.

In the course of this environmental assessment the developer made a number of commitments which will assist in preventing these impacts.

Further, the Review Board has decided to recommend a series of measures and has made a number of suggestions (a full listing of which is found in Appendix A) in order to prevent significant environmental impacts in the Deh Cho region as a result of the Imperial Deh Cho Geotechnical Program.

**Having considered all the evidence on the public record, the Review Board has concluded that the potential significant adverse impacts of the proposed development can be prevented if the developer's commitments and the mitigation measures identified in this *Report of Environmental Assessment* are implemented.**

**The Review Board therefore recommends, pursuant to Section 128(b)(ii) of the *MVRMA* that the proposed development proceed to the regulatory phase for approval.**

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# 1 Introduction

This document is the Mackenzie Valley Environmental Impact Review Board's *Report of Environmental Assessment and Reasons for Decision* ("Report of Environmental Assessment"), regarding Imperial Oil Resources Ventures Ltd.'s proposed Deh Cho Geotechnical Program (EA 03-009). It is issued pursuant to subsection 128(2) of the *Mackenzie Valley Resources Management Act (MVRMA)*.

This document is organized as follows:

Section 2 provides background information on the Mackenzie Valley Environmental Impact Review Board (Review Board), the decision to conduct an Environmental Assessment (EA) of this development and the requirements for an EA under the *Mackenzie Valley Resource Management Act (MVRMA)*.

Section 3 provides an overview of the environmental setting for the development and a brief description of the development proposal.

Section 4 sets out the Review Board's EA process and describes the role of each EA phase in the determination made by the Review Board under section 128 of the *MVRMA*.

Sections 5 to 15 outline the Review Board's determination of the scope of the development and of the environmental assessment. These sections consider the components of the development that the developer was required to describe in its submissions in the EA, including effects predicted on the biophysical and socio-economic environment. These sections include the Review Board's conclusions about the environmental impacts of the proposed development and their significance.

Section 16 explains the importance of implementing the commitments made by the developer during the course of the EA, and of implementing the mitigation measures recommended by the Review Board, in order to prevent significant adverse environmental impacts.

Section 17 provides a general conclusion to this report of EA.

A list of the developer's commitments is also included as Appendix C1.



## 2 Development Referral

### Referral of the Proposed Development to the Review Board

Imperial Oil Resources Ventures Limited (Imperial or “the developer”) applied for a Land Use Permit (MV2003X0045) and a Type “B” Water License (MV2003L8-0012) from the Mackenzie Valley Land and Water Board (MVLWB) on October 27, 2003. The MVLWB carried out a Preliminary Screening of the proposed development under section 124 of the *MVRMA*. Pursuant to section 124(3), the MVLWB acted as lead screener. The MVLWB consulted 30 organizations during the Preliminary Screening process.

On February 12, 2004, the MVLWB completed the Preliminary Screening, deciding not to refer the development for Environmental Assessment. Subsequently, the Review Board received letters from communities in the Deh Cho Region describing concerns with the proposed development. On February 25, 2004, the Review Board decided to conduct this environmental assessment on its own motion pursuant to subsection 126(3) of the *MVRMA*, on the basis of public concern about the socio-economic and environmental impacts of the development.<sup>1</sup> For the purposes of this *Report of Environmental Assessment*, the development is referred to as the Imperial Deh Cho Geotechnical Program.

### Requirements of the *Mackenzie Valley Resource Management Act*

The Review Board administers Part 5 of the *MVRMA* and has decision-making responsibilities in relation to the proposed development.<sup>2</sup> The Review Board is responsible for the conduct of an environmental assessment which considers the environmental, socio-economic and cultural impacts of the proposed development in accordance with section 114 and section 115 of the *MVRMA*. The conduct of the Imperial Geotechnical Program environmental assessment was based the Review Board’s *Rules of Procedure* and *EIA Guidelines*.

Pursuant to subsection 117(1) of the *MVRMA*, the Review Board must determine the scope of the development and it must also address the factors set out in subsection 117(2), subject to any consultation with responsible ministers, if such consultation is requested. None was requested. The Review Board is also required to prepare and submit a report of EA in accordance with subsection 128(2), a decision under subsection 128(1), and written reasons for decision, required by section 121, to the Minister of the Department of Indian and Northern Affairs Canada (INAC).

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<sup>1</sup> See the Review Board’s Reasons for Decision documents of March 2, 2004 and March 3, 2004 for more information regarding the community concerns and the Board’s subsequent decision to conduct an environmental assessment. These documents are labeled Public Records #12 to #18 in Appendix D herein.

<sup>2</sup> The Minister of the Department of Indian and Northern Affairs Canada (INAC) and responsible ministers decide whether to accept the Review Board’s measures and suggestions, unless the Board orders an Environmental Impact Review.

## 3 Development Overview

### 3.1 ENVIRONMENTAL AND SOCIAL SETTING

This description of the environmental setting for the development is based on the broad definition of environment in the *MVRMA* that includes land, water, air or any other component of the environment, including the social and cultural environment.

The Deh Cho region of the Mackenzie Valley Northwest Territories is the location of the proposed development. Deh Cho is the Dene term for the “Big River”, and the Mackenzie River is the dominant geophysical feature of the region. It runs approximately 1700 km from Great Slave Lake into the Beaufort Sea, with a watershed of almost 2 million square kilometres, draining some 20% of Canada.

The developer plans to undertake geotechnical investigations along the following general route of approximately 450 km (from north to south, and as seen on Map 1):

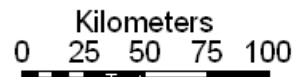
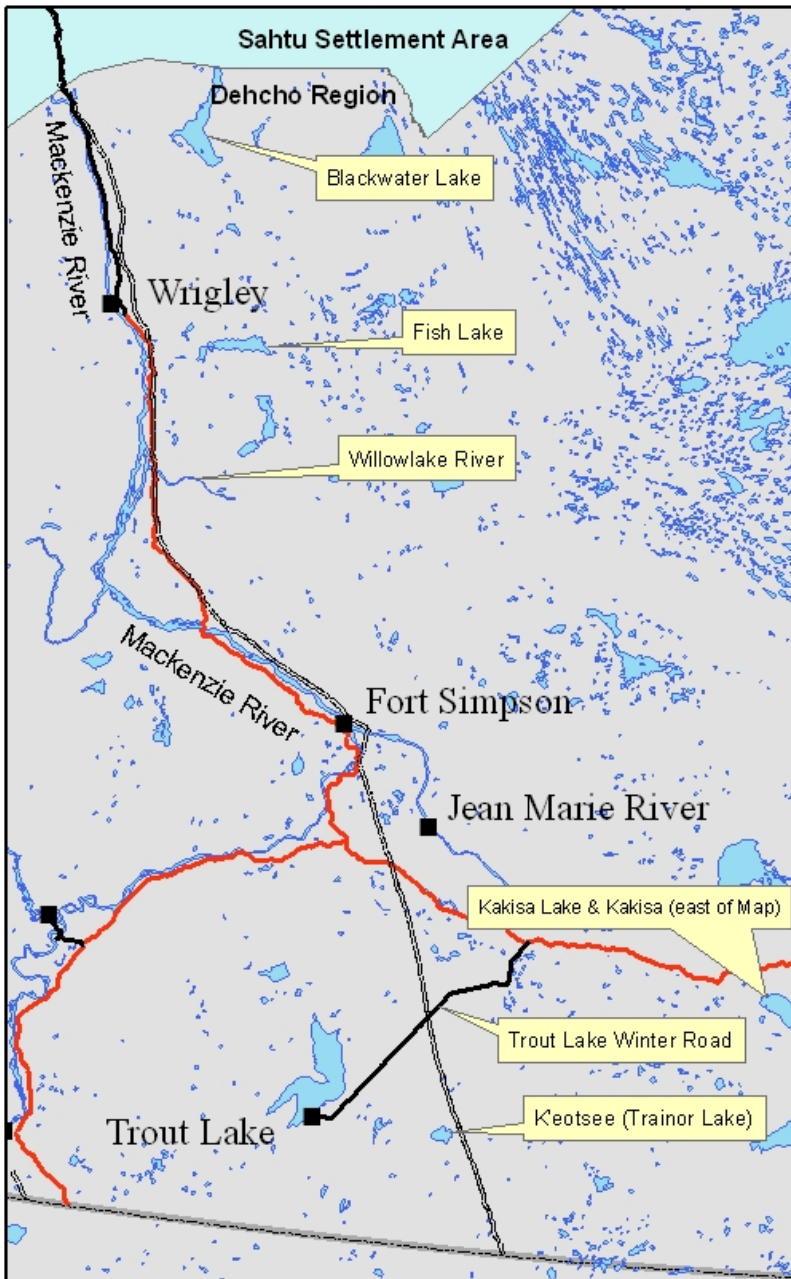
- Along the east side of the Mackenzie River from the border with the Sahtu Settlement Area to the confluence of the Willowlake River; then
- Southeast until crossing the Mackenzie River just east of Fort Simpson; and then
- South by Southeast until reaching the Alberta border just east of the British Columbia - Alberta boundary.

There are five communities with traditional lands in the area of the proposed development: Wrigley, Fort Simpson, Jean Marie River, Trout Lake and Kakisa. The population of each of these communities is primarily aboriginal. In addition, there are many areas along the proposed development route, especially where the Mackenzie River is fed by tributaries that are important hunting, fishing, gathering, and spiritual sites for the people of the Deh Cho region.

Land claims have not yet been settled in the Deh Cho region but negotiations between the Dehcho First Nations and Canada have been underway for some time based on a Framework Agreement signed in 2001. An Interim Measures Agreement (IMA) addressing land and resource management issues and land use planning in the Deh Cho region was also signed in 2001 by the Dehcho First Nations, the Governments of Canada and the Northwest Territories.

The climate of the Deh Cho region has mean temperatures ranging from -25.4°C in January to 17.2°C in July. The developer is proposing to work only during the winter (January to March) season because of the difficulty travelling with large equipment during warmer months and because of the mitigating effect that snow cover has in protecting the ground and vegetation from disturbance.

**Map 1: EA03-009 Imperial Geotech EA -  
Dehcho Region and Approximate Location of Imperial Geotechnical Program**



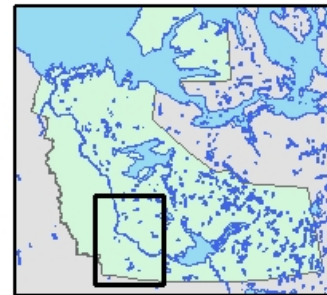
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Created January 10, 2005

**Legend**

- communities
- Expressway / Highway
- Winter Roads
- settled claims
- lakes
- NWT borders
- existing pipelines and Imperial Geotech work area

Note: The existing (Enbridge) pipeline right-of-way indicated here approximately coincides with the location of the proposed Mackenzie Gas Project development corridor and the proposed locations of the Imperial Deh Cho Geotechnical Program.



The terrain of the Mackenzie Valley has been sculpted by the area's glacial history. Surficial materials consist of unconsolidated sediments. Materials associated with the cycle of advance and retreat of the Laurentide Ice Sheet cover most of the area.

One of the most important features of the area is the presence of permafrost. Permafrost is the portion of the earth's surface that has perennial ground temperatures below 0°C. The Deh Cho region has seen recent reclassification<sup>3</sup>, describing most of it as an area of sporadic permafrost (10-35% of the land area) with visible ice content varying from 0-15% by volume. Mapping the extent of permafrost as well as the soil horizons and stability of the ground in the peat bogs that are predominant in the south Deh Cho are two key aspects of the proposed geotechnical work.

The route of the proposed development is approximately 450 km long. It passes through five different ecoregions. They are summarized here (again, from north to south):

1. **The Mackenzie River Plain** has wetlands covering 25-50% of the ecoregion. These generally poorly-drained lowlands are characterized by closed stands of black spruce with dense ground-cover of feathermoss, bog cranberry, blueberry, Labrador Tea and lichens.
2. **The Franklin Mountains** has more open stands of black spruce in its uplands environs, although there is still a mixture of dry and wet sites.
3. **The Horn Plateau (Edehdzie)** has similar attributes to the Mackenzie River Plain, but is characterized by an even wetter ecoregion with 50% of the area covered in peat plateau bogs, palsa and fens.
4. **The Hay River Uplands** have more closed, mixed stands of trembling aspen, balsam poplar, and mixed conifers. Approximately 30% of this ecoregion is occupied by poorly drained fens and bogs, home to tamarack and black spruce.
5. **The Northern Alberta Uplands** has between 50 and 70% wetlands. Its drier sites are similar in flora to the Hay River Uplands.

Imperial's Developer's Assessment Report (DAR) indicated that the proposed borrow sites for granular material are often found in terrain features such as eskers, kames, outwash and gravel till deposits that represent only a small portion of the overall ecoregion. These areas tend to have unique vegetation communities, earlier berry production, and regionally rare plants.

The Deh Cho region supports a variety of ungulates, large carnivores, fur-bearers and small mammals. Of these, wood bison, woodland caribou, grizzly bear, and wolverine are listed on the schedules to the *Species at Risk Act*. Moose and caribou are of special economic importance to surrounding communities, particularly as traditional foods. Smaller fur-bearers are trapped for their fur. Moose and caribou use the Mackenzie River, its islands, and its

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<sup>3</sup> Heginbottom, J.A. (2000). Permafrost distribution and ground ice in surficial materials. In L.D. Dyke and G.R. Brooks (eds). *The Physical Environment of the Mackenzie River Valley, Northwest Territories: a Base Line for the Assessment of Environmental Change*. Geological Survey of Canada, Bulletin 547: 31-40.

tributaries as key habitat and migration corridors. The Deh Cho region also supports a wide variety of birds, 60 species of which were identified by Imperial aerial surveys.

The aquatic environment of the Deh Cho region supports 33 different species of fish, many of which - such as walleye, northern pike, arctic grayling, and species of trout, sucker and whitefish – are economically important to local communities.

Subsistence harvesting is an important part of life for many of the communities along the proposed route of the Imperial Deh Cho Geotechnical Program. This includes hunting, trapping, fishing and harvesting of plants. Harvesting activities are important as contributions to the subsistence economy, and are important to the health and well-being of communities, offering physical activity and nutritious foods that are far healthier than most store-bought counterparts. Harvesting also provides cultural benefits from the activity itself, the sharing of foods in communities, and reinforces connections to the land. Harvesting is an important part of the identity and lifestyle of many community members in the Deh Cho region.

### **3.2 DESCRIPTION OF THE DEVELOPMENT**

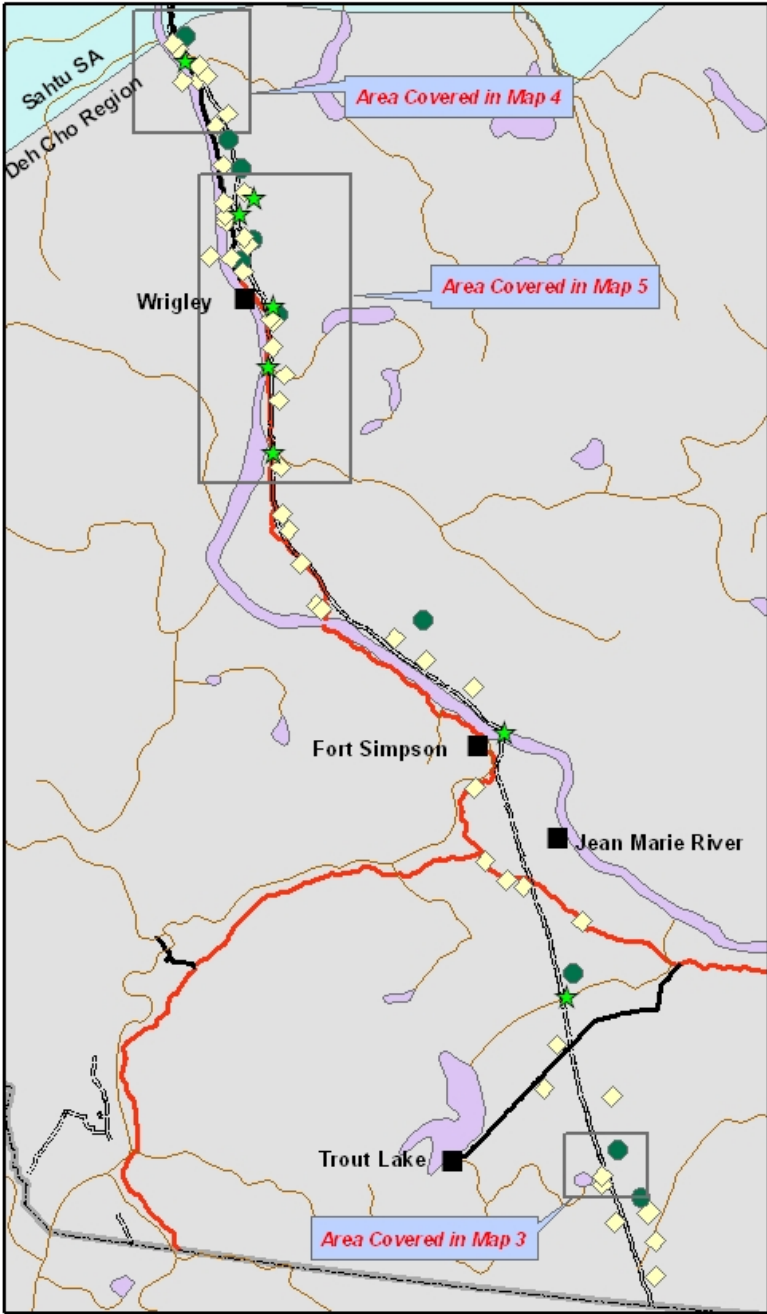
Imperial is one of the developers proposing the Mackenzie Valley Gas Pipeline (MGP), which was referred to an Environmental Impact Review by the Review Board in May 2004. As the proposed principal operator of the MGP, Imperial would like to investigate sub-surface conditions along the likely pipeline route in order to more effectively assess the feasibility of any subsequent engineering and construction. It completed a first stage of this geotechnical survey in the Sahtu Settlement Area in the winter of 2003-2004. The main goals of the Imperial Deh Cho Geotechnical Program are to do the following (as outlined in the DAR – see Map 2 for approximate site locations):

- Identify sand and gravel borrow sites along the proposed pipeline route (requiring some 236 boreholes and the digging of test pits at 43 sites);
- Check permafrost conditions (frost heaves – 30 boreholes at 10 sites); and
- Search for the best conditions for pipeline river crossings along the proposed pipeline route (32 boreholes at eight river crossings).

Imperial is proposing to start this work in the winter of 2004-2005, although initiation date of the work may be subject to change. Access to the work sites (see Map 2) would primarily be via the existing winter road north from Wrigley, the Trout Lake winter road, the Mackenzie Highway and the Enbridge pipeline right-of-way. For access beyond these roads, Imperial will clear 406 kilometres of existing routes, cutlines and trails (some of it re-grown) and 45km of new access in areas of original growth.

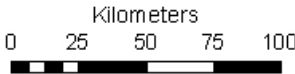
Four portable rig camps would be set up at appropriate sites to house the contractors. Heavy equipment and vehicle use will be required for these operations. These include D5-D8 bulldozers, graders, backhoes, drill rigs on tracked carriers or sleighs, tracked

**Map 2: EA03-009 Imperial Geotech EA -**  
 Approximate Locations of Proposed Work Sites: Imperial Geotechnical Program



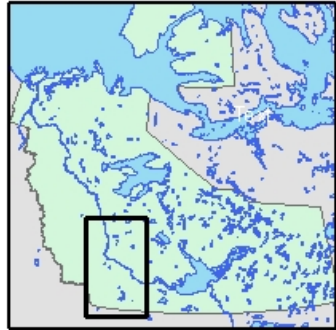
This is not a legal document. For illustration purposes only. Sites not to scale. For more information contact the Mackenzie Valley Environmental Impact Review Board at (867) 766-7050. For site specific details, see Type A Land Use Permit Application MV2003X0045 with the Mackenzie Valley Land & Water Board.

Created February 7, 2005



- Legend**
- Expressway / Highway
  - Winter Road
  - settled claims
  - NWT borders
  - existing pipelines
  - rivers
  - waterbody
  - communities
  - ★ river crossings
  - frost heave sites
  - ◇ borrow sites

**Note: The existing (Enbridge) pipeline right-of-way indicated here approximately coincides with the location of the proposed Mackenzie Gas Project development corridor.**



personnel carriers, snowmobiles, 4x4 pickup trucks, tracked fuel carries, brush cutter, generators, water pumps, helicopter, tractor trailers, tandem axle trucks and water trucks.

A variety of fuels, including gasoline, diesel, aviation fuel and propane will be used in onsite activities and stored on site. The water permit applied for includes water usage for the purposes of road construction and camp operations.

The ground-based test sites will be investigated using such equipment as:

- Auger drill rigs;
- Air rotary drill rigs;
- Mud rotary drill rigs; and
- Backhoes.

Drill rigs will be mounted on tracked carriers or sleighs. The maximum clearing size for boreholes is estimated to be 10m x 10 m; for test pits, it is 25m x 25m. All disturbed sites will be cleaned up and restored to as near original condition as possible at the end of the investigations. This includes replacing stockpiled surface materials, rolling back cleared vegetation onto the access trails, and complete demobilization of temporary camps and equipment.

At larger river crossings, in-river drilling would be undertaken. Before drilling, ice thickness would be measured and, where necessary, ice bridges constructed. The installation of ground thermometers, topographic surveying and geophysical surveying would be undertaken.

## 4 Environmental Assessment Process

### 4.1 PARTIES TO THE ENVIRONMENTAL ASSESSMENT

There were nine parties to the Environmental Assessment (EA), including Imperial. According to the Review Board's *Rules of Procedure*<sup>4</sup>, the developer is deemed to be a Directly Affected Party. The remaining eight registered parties were composed of first nations, communities and Aboriginal groups. They consisted of:

- Ka'a'Gee Tu First Nation (Kakisa)
- Pehdzeh Ki First Nation (Wrigley)
- Sambiaa K'e First Nation (Trout Lake)
- Liidlii Kue First Nation (Fort Simpson)
- Dehcho First Nations
- Metis Nation Local 52 (Fort Simpson)
- Jean Marie River First Nation
- Village of Fort Simpson

The Dehcho First Nations has been represented throughout this EA by its Pipeline Working Group, which changed its name during the course of the environmental assessment to the Dehghah Alliance Society. The name "Dehghah Alliance Society" (or DAS) is used in the place of Pipeline Working Group in this report.

During the EA process, representatives of government departments had the opportunity to identify their interest and to notify the Review Board of their intent to participate in the proceeding as a Responsible Minister, as defined in section 111 of the *MVRMA*. The responsible ministers play a role in the decision-making process and include the Department of Fisheries and Oceans (DFO), Environment Canada (EC), Indian and Northern Affairs Canada (INAC), and the Government of the Northwest Territories (GNWT), as represented by the Department of Resources, Wildlife and Economic Development (RWED). The Minister of INAC is the federal Minister as defined by the *MVRMA* and plays a central coordinating role for decision-making in the environmental assessment. These government organizations, as a result of their Responsible Minister status under the *MVRMA*, were allowed to participate fully in the environmental assessment.

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<sup>4</sup> MVEIRB 2002. *Rules of Procedure for Environmental Assessment and Environmental Impact Review Proceedings*. May 2002.



## 4.2 ENVIRONMENTAL ASSESSMENT APPROACH

The EA process had three phases: a scanning phase to define information needs and to describe the development and potential impacts; an analysis phase to explore the reasons for public concern and associated environmental issues; and a decision phase to consider, evaluate, and weigh evidence in order to render an EA decision. Figure 1 shows the phases of the EA and which tasks were undertaken in each phase.

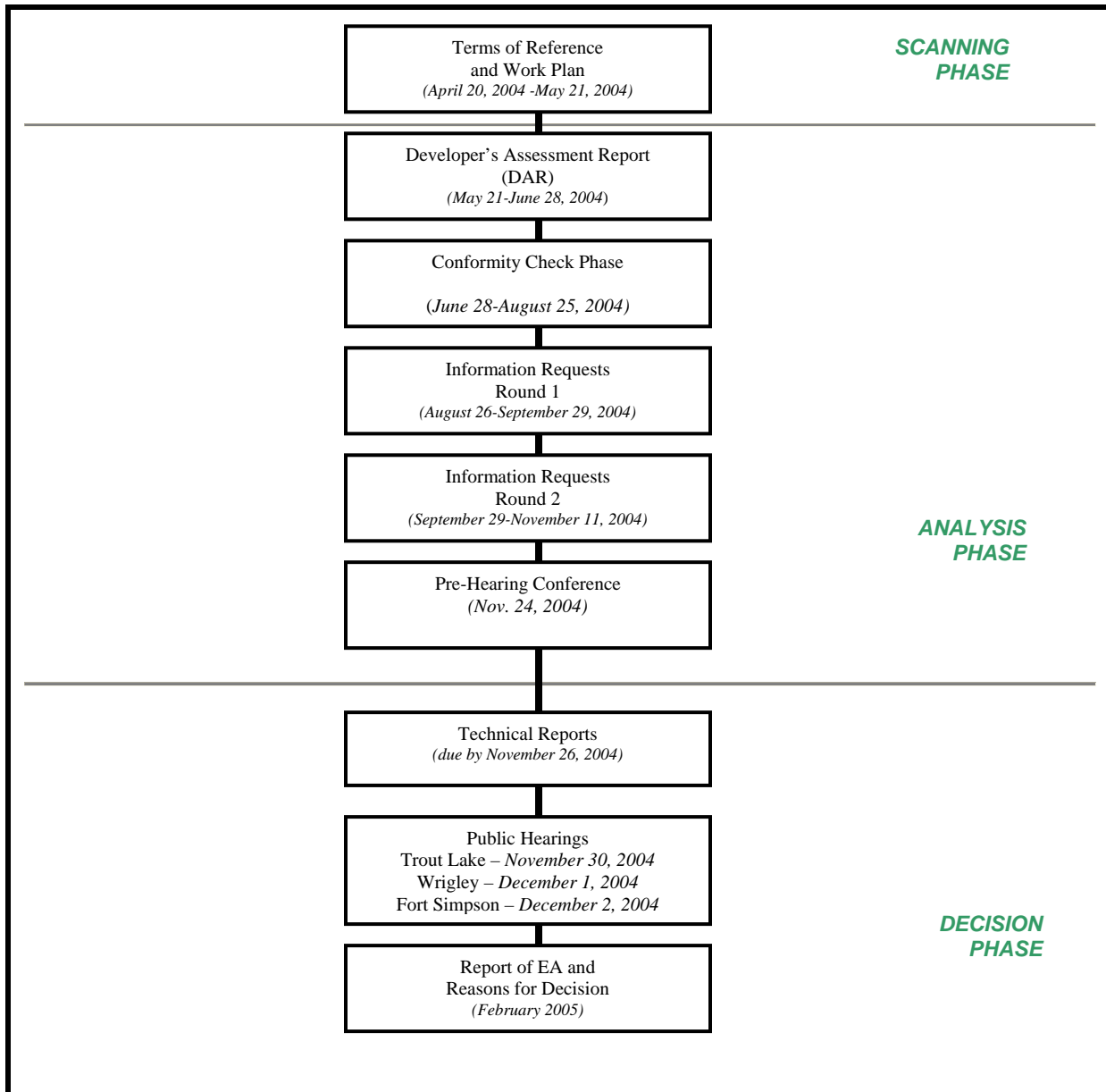


Figure 1: Imperial Geotechnical Program Environmental Assessment Process

### ***Development of the Terms of Reference and Work Plan***

The Review Board issued a *Draft Terms of Reference and Work Plan* (“*Terms of Reference*”) for the EA on April 20<sup>th</sup>, 2004. This was distributed to interested organizations.<sup>5</sup> Comments on the *Draft Terms of Reference* were received from Imperial, EC, DAS, INAC and DFO.

The final *Terms of Reference* was issued on May 21, 2004. The *Terms of Reference* described the scope of development and scope of assessment and provided direction to Imperial and others about their roles, responsibilities and the deliverables in the EA process. The Work Plan established the milestones and identified the Review Board’s timelines and expectations for the completion of the EA.

In general, the Work Plan was adhered to and there were no requests or concerns expressed by the parties for amendments through rulings by the Review Board. Some exceptions were certain late submissions by Imperial, and a ruling at the Fort Simpson hearing to allow DAS and Imperial to submit written closing statements after the hearing, after receipt of a response to an information request by the GNWT Department of Transportation (DOT).

### ***Submission of the Developer’s Assessment Report***

The Developer’s Assessment Report (DAR) was prepared according to the final *Terms of Reference* issued by the Review Board. The Review Board received the DAR on June 28, 2004.

### ***Conformity Check and Response Phase***

Imperial’s DAR was found to be in non-conformity with the final *Terms of Reference* by the Review Board on July 14, 2004. Imperial submitted additional information to supplement the DAR on August 11, 2004. Imperial’s DAR was found to be in conformity with the final *Terms of Reference* by the Review Board on August 25, 2004.

### ***Information Request Phase***

The Review Board issued two rounds of Information Requests (IRs). The first round of Information Requests was developed by the Review Board and included a total of nine IRs issued to the Developer and parties on Sept. 15, 2004. Responses were received on Sept. 29, 2004. The second round of Information Requests was proposed by DAS and 30 IRs were issued to the developer by the Review Board on Oct. 26, 2004. The developer’s responses to the second round of IRs were received on Nov. 11, 2004. .

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<sup>5</sup> This consisted of those organizations listed in section 4.1 above and government departments. Not all organizations on the initial distribution list requested party status in the EA.

### ***Pre-Hearing Conference***

A pre-hearing conference was held in Yellowknife on Nov. 24, 2004 by Review Board staff and legal counsel. The public was notified via newspaper announcements. Parties to the EA and the public were invited to attend.

The pre-hearing conference was devoted to a discussion of the hearing process and procedures and to setting a draft agenda for the public hearing.

### ***Public Hearings***

Three public hearings were held in relation to this EA. Public hearings were held:

- November 30, 2004 in Trout Lake;
- December 1, 2004 in Wrigley; and
- December 2, 2004 in Fort Simpson.

The public was notified of the public hearings by means of public radio announcements, posters in the community and newspaper ads. The principal goal of the public hearings was to allow potentially affected communities, parties, and the general public an opportunity to hear and participate in a discussion of the issues unresolved during the EA process leading up to the hearings. It was also an opportunity to enable members of the public to speak directly to the Review Board on issues related to the proposed Imperial Deh Cho Geotechnical Program which they considered to be of importance.

In the hearings, presentations were made by the developer and other parties to the EA. All parties to the EA had the opportunity to question all presenters. A thorough review of the proposed development took place at each venue, and all parties had the opportunity to highlight issues they felt important for the Review Board's deliberations.

Although federal departments did participate in this EA through written submissions, they chose not to participate in the hearing process in the Deh Cho communities, notwithstanding a written request for their attendance by the Review Board. The absence of federal representatives was noted by the developer and attracted critical comments by first nations and community representatives at all three hearing venues. The Government of the Northwest Territories did make arrangements to have knowledgeable staff present in Fort Simpson and the Review Board appreciates the assistance they provided.

The conduct of Review Board proceedings depends on the participation of government departments with environmental and other expertise. Section 22 of the *MVRMA* makes special provision for access to information held by government departments and agencies. Section 25 of the Act provides the Review Board the authority to compel the attendance of witnesses in its proceedings. The Review Board has never had to resort to such compulsion.

The expertise and background knowledge of federal representatives is an important resource which can contribute to the exchange which takes place in Review Board hearings. These interactions can and do inform the public about a development even if federal departments themselves have no outstanding concerns with a proposed development. Government representatives have obligations to the affected public as well as to the Review Board. It is worth noting that recent decisions of the Supreme Court of Canada<sup>6</sup> hold that the environmental assessment process can be an important opportunity for the Crown to meet its consultation obligations to aboriginal people. It is, in the Review Board's view, difficult to understand how effective consultation can be achieved through its proceedings when representatives of the federal Crown are not even present.

### ***Environmental Assessment Decision***

The Review Board submits this *Report of Environmental Assessment* to the Minister of INAC pursuant to subsection 128(2) of the *MVRMA*. The Minister provides it to other responsible ministers. The developer and the other parties will also receive copies of the *Report of Environmental Assessment*.

## **4.3 DETERMINATIONS OF SIGNIFICANCE**

Section 128 of the *MVRMA* requires the Review Board to decide, based on the evidence on the public record<sup>7</sup>, whether or not, in its opinion, the proposed development will likely have a significant adverse impact on the environment or be a cause for significant public concern. The Review Board's determinations in this regard are contained in this *Report of Environmental Assessment*.

The parties to the EA were asked to assist the Review Board by providing the basis for any conclusions they might draw about the significance of the potential impacts of the development. The Review Board asked the developer for its predictions of impacts and a description of the reasoning behind those predictions. Ultimately, however, the Review Board is required by law to make the final determination on the question of impact significance. In so doing, the Review Board considers, among other things, the following characteristics of any environmental impacts identified:

- Magnitude;
- Geographic extent;
- Timing;
- Duration;
- Frequency;
- Nature of the impact;
- Irreversibility of the impact;
- Probability of occurrence; and,
- Predictive confidence level.

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<sup>6</sup> Specifically, *Taku River Tlingit First Nation v. British Columbia (Project Assessment Director)* 2004 SCC 74.

<sup>7</sup> The "public record" refers to the part of the public registry that the Review Board considers when making its decisions. The documents in the public registry not reviewed as part of the public record include documents that are filed after the date the Review Board sets for the closing of the public record.

If the evidence on the public record raises issues of public concern, the Review Board evaluates that evidence both in its own right and in light of any related determinations made about the significance of the impacts on the environment caused by the development. Significant public concern is also a basis upon which the Review Board could refer the development to Environmental Impact Review (under *MVRMA* subsection 128(1)(c)).

The Review Board makes its significance determination using all the information sources on the public record to consider whether or not, based on the *MVRMA* and the evidence, the development is likely to cause a significant adverse environmental impact or be a cause of significant public concern. Depending on the nature of the impact, this determination of significance may involve comparing quantitative or semi-quantitative predictions to benchmarks, or for those impacts that can not be meaningfully described quantitatively, using the Review Board's own subjective and informed judgment to reach a conclusion on the significance of the predicted impact.

The Review Board's analysis and the reasons for its determination of the significance of the impacts that are likely to result from the proposed Imperial Deh Cho Geotechnical Program are described in detail in Sections 6-16.

## 5 Scope of the Proceeding

### 5.1 SCOPE OF THE PROPOSED DEVELOPMENT

The scope of the development describes the elements of the proposed development that are considered in the EA. The scope of development takes into account both principal and accessory development activities.

The scope of the development for this EA was based on the description presented in the DAR and the developer's presentation at the public hearing, as amended in response to the issues and questions that arose. It also includes all those commitment to changes in the development and mitigation made throughout the EA. These commitments are listed in Appendix C-1 to this report of EA.

The scope of the development determines the activities which can be undertaken pursuant to any subsequent land use permit, water license or other regulatory instruments. These activities may not exceed the scope of the development set out in this EA without requiring further preliminary screening.

Based on the developer's evidence, the Review Board determined that the proposed development includes physical work and undertakings related to the investigation of subsurface conditions in the Deh Cho region along a preliminary proposed corridor route for the Mackenzie Valley Pipeline, to assess engineering and construction feasibility issues. The Review Board has identified the principal development components to be as follows:

- Use of various types of drill rigs, including auger, air rotary and mud rotary drill rigs;
- The clearing and possible construction of access to investigation sites from existing primary access routes. This may include the use of existing cut lines, access roads and right-of-ways, the clearing of new access routes via vegetation removal along re-grown cut lines and previously undisturbed ones;
- The possible construction of ice roads and ice bridges, and the use of water for these purposes and for camp operations;
- Excavation of soils and stripping of overburden;
- Use of machinery including bulldozers, backhoes, graders, helicopters, trucks, and other equipment; and
- The establishment of work camps<sup>8</sup> at four locations.

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<sup>8</sup> The developer has forwarded several different versions of where, how many, and what number of staff will be located at these camps. The original submission to the MVLWB called for two 65 person camps at five possible locations (Blackwater River, Wrigley, Willowlake River, Fort Simpson & Trout Lake Road). The most recent information from the public hearings indicated that there will be three 65 person camps (at Blackwater, Willowlake, and Checkpoint), and a 30 person camp at Trout Lake Road.

## **5.2 SCOPE OF THE ENVIRONMENTAL ASSESSMENT**

The scope of assessment describes the components of the environment that will be evaluated for impacts from the proposed development. In determining the scope of assessment, the Review Board was conscious of its obligation under subsection 117(2) of the *MVRMA* to consider:

- the impact of the development on the environment, including the impacts of malfunctions or accidents;
- any cumulative effects that are likely to result from the development in combination with other developments; and,
- comments submitted by members of the public.

After considering the relevant information available on the public record, the Review Board decided on the scope of this assessment.

The geographic scope of this environmental assessment includes the ecological footprint of the proposed development as described above, and the surrounding traditional land use areas of the potentially affected communities, plus the access routes including but not limited to the Mackenzie Highway east of Enterprise, the Highway 1 winter road north of Wrigley, and the Trout Lake winter road. The geographic scope also includes the potentially affected communities themselves.

The temporal scope of this environmental assessment includes the full timeframe required for good cumulative effects assessment, including the time-span of effects from past, present and reasonably foreseeable future human activities that interact to affect the same environmental components as the Imperial Deh Cho Geotechnical Program does.

The public record of the Preliminary Screening also provided some evidence for the Review Board's EA consideration, in accordance with section 117(2) of the *MVRMA*. The public record included concerns voiced by Deh Cho communities in their attempt to refer the development to environmental assessment. The Review Board reserved the right to raise other issues in the course of the assessment, as it deemed appropriate. Although some of the required information was available in Imperial's application package, the Review Board required more information on social, economic, cultural and biophysical impacts. This information was sought from the developer, as laid out in Section 4 of the *Terms of Reference*.

### **Scoping and the Relationship of the Geotechnical Work to the Mackenzie Gas Project**

In this environmental assessment, the Review Board is focused on assessing the impacts of the proposed geotechnical works, and not of the Mackenzie Gas Project (MGP), which will

be evaluated by the Joint Review Panel for the Mackenzie Gas Project. The Imperial Deh Cho Geotechnical Program and the pipeline differ greatly in activity, scale, magnitude, specific locations, timing, and many other respects. During hearings and throughout this environmental assessment, the Review Board has attempted to ensure that the parties focused on the geotechnical work as opposed to the pipeline.

Bearing that in mind, the geotechnical work and the pipeline cannot be viewed as completely separate developments because they are inherently related. Both developments occur along the same route, affect the same communities and are proposed by the same developer. The MGP is formally proposed, and is illustrated in some detail on Imperial's own maps in the application for the geotechnical work.

When the Review Board considers the cumulative impacts of a proposed development, it also considers the impacts of reasonably foreseeable future developments in combination with the currently proposed undertaking. The MGP components, although not entirely certain, are reasonably foreseeable. Regulatory applications have been filed for that project and the environmental impact review is underway. The inclusion of reasonably foreseeable future activities is a fundamental part of cumulative effects assessment, as described in Appendix H of the Review Board's March 2004 *EIA Guidelines*.

In its *Terms of Reference* for the Developer's Assessment Report, the Review Board did not require Imperial to predict all combined impacts of the geotechnical work in combination with all potential impacts of the proposed MGP. The Review Board, considering the differences between the geographic scope and temporal scale of the two proposed developments, decided that it was not reasonable to require Imperial to assess all the impacts of the MGP in combination with the geotechnical program. However, the Review Board recognized that it might be necessary to consider the combined impacts of the geotechnical work and certain components of the MGP in its deliberations, but only where location-specific issues made such consideration necessary for cumulative effects assessment.



## 6 Introduction to Assessment of Impacts

Sections 7-14 of the *Report of Environmental Assessment* consider specific issues related to impacts that arose during the environmental assessment. All information is based on material from the public record. For each impact, the Review Board describes:

- Imperial's submissions and predictions (based on the *Developer's Assessment Report in support of the Environmental Assessment of the 2004 Winter Field Geotechnical Investigation Program in the Deh Cho Region*);
- Other relevant items on the public record (such as submissions from parties to the EA);
- The analysis and conclusions of the Review Board pertaining to each issue; and,
- The measures or suggestions of the Review Board (if any).

The deliberations of the Review Board considered evidence from the hearings at Trout Lake, Wrigley and Fort Simpson, as well as the written evidence on the public record.<sup>9</sup>

The Review Board has considered all issues raised in this EA, pursuant to the requirements of *MVRMA* section 117. Issues that the Review Board finds to be evidently and adequately addressed by the material on the public record are not discussed in this report. The only issues discussed in detail in this *Report of Environmental Assessment* are those which the Review Board decided warranted further detailed consideration.

The outstanding items addressed in sections 7-15 of this report involve:

- The K'eotsee (Traynor) Lake Watershed;
- Road Issues;
- Community Environmental Monitors;
- Ongoing TK Studies;
- Access and Benefit Agreements;
- Harvester Compensation;
- Caribou and Moose;
- The Blackwater River Area; and,
- Other Sensitive Sites near Wrigley.

The conclusions reached in this document are based on, and contingent upon, Imperial fulfilling all of its commitments made during the environmental assessment. These include the commitments listed in Imperial's DAR of June 2004, plus any commitments made after that submission, including verbal commitments made during hearings (see Appendix C1 for the list of commitments). If Imperial fails to fulfill these commitments, the foundation for the Review Board's determinations regarding the significance of impacts as set out below would be undermined.

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<sup>9</sup> See Appendix D for a full listing of documents on the public registry.

## 7 K'eotsee (Traynor) Lake Watershed

Since the beginning of this environmental assessment, the Smbaa K'e First Nation (SKFN), based in Trout Lake, has expressed concerns regarding potential development in the K'eotsee (Traynor) Lake watershed.

The area in question is a portion of the K'eotsee Lake watershed to the north and east of K'eotsee Lake (see Map 3). The following works are proposed by Imperial:

- Accessing and drilling two borrow sites (sites 20.004PB and 20.004PA). Access to the sites requires one kilometer of new access, in addition to the use of existing routes;
- A frost heave investigation site (site FH 21); and
- Use of K'eotsee Lake as a water source (ID DCS12).

Information submitted to the Review Board by Imperial during the Wrigley hearing on Dec. 1, 2004 indicates a future plan for Imperial to locate a 900 person camp, fuel storage, pipe and material stockpile, equipment storage and contractor marshalling area in the vicinity of K'eotsee Lake as a part of the MGP. The proposed geotechnical works are exclusively for investigating potential borrow sites, and not for locating these other facilities.

With respect to this area, the Review Board included the following item in section 4.8 of the *Terms of Reference*:

*H-4 K'eotsee/ Traynor Lake: Describe in detail the proposed development and potential impacts in the K'eotsee Lake watershed, along with details regarding with any concerns voiced, and the commitments of Imperial in response to those concerns in terms of development design. Describe any remaining activities proposed by Imperial within the watershed and their impacts. Describe detailed mitigations to minimize or avoid those impacts.*

In its Deficiency Statement of July 14, 2004, the Review Board identified the inadequacy of the DAR in responding to the *Terms of Reference* with respect to the K'eotsee Lake watershed. The Review Board stated that “(n)o details were submitted regarding concerns voiced regarding potential impacts in the K'eotsee Lake watershed, Imperial's commitments in response to those concerns, or mitigations to minimize or avoid those impacts”.

## **7.1 IMPERIAL'S SUBMISSIONS**

In its DAR (June 2004), Imperial noted that concerns of the SKFN regarding development in the K'eotsee Lake watershed were expressed in a meeting in Trout Lake, on July 23, 2003. Imperial's DAR further cites correspondence with SKFN repeating the concerns of Trout Lake, and indicating that the SKFN would assist with identifying alternative sites. Imperial replied on Dec. 16, 2003, that it intends on keeping these sites in the program.

In its Aug. 11, 2004 response to the Review Board's Deficiency Statement of July 14, 2004, which required greater detail about the SKFN's concerns and Imperial's responses, Imperial gave more specific information. Imperial stated that the proposed geotechnical works will result in minimal to minor impacts to the land, wildlife, nearby residents, and traditional harvesters, except for borrow-site test-pit excavation, which may result in "moderate impacts to the land".

Imperial stated in the DAR that while there was no concern noted about the frost heave works there was concern for both borrow sites regarding proximity to the watershed area and potential contamination. Regarding the use of K'eotsee Lake as a water source, Imperial stated that "[t]he area is of significant cultural and ecological value and every effort should be made to minimize any potential impacts to this area" (Deficiency Response item 4.0B).

In response to the SKFN's concerns, Imperial said it met with the community to discuss plans, timing, and concerns. Imperial also stated that it took community representatives on a helicopter overflight of all sites in the K'eotsee Lake watershed. Imperial committed that "during the 2004 Summer Reconnaissance, Imperial will attempt to locate alternatives to borrow site 20.004PA".

In response to earlier concerns described by the SKFN to Imperial, the MGP corridor was moved eastward 2.5 km away from its initially proposed route by K'eotsee Lake (SKFN letter, Sept.23 2004).

In reference to K'eotsee Lake, Imperial stated in the Wrigley hearing that Imperial dropped one gravel site near K'eotsee Lake due to the poor quality of the gravel, and is actively considering input from the community on the other site. Imperial also looked at two alternative sites proposed by the community. Imperial dropped one for not having good gravel, and added the other (20.004PC) to the program as a direct result of community input (Dec. 1, 2004, Wrigley Hearing Notes).

**Map 3: EA03-009 Imperial Geotech EA -  
K'eotsee (Traynor) Lake Area and Original Imperial Geotechnical Program Siting**



**Mackenzie Valley**  
Environmental Impact Review Board

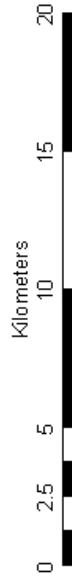
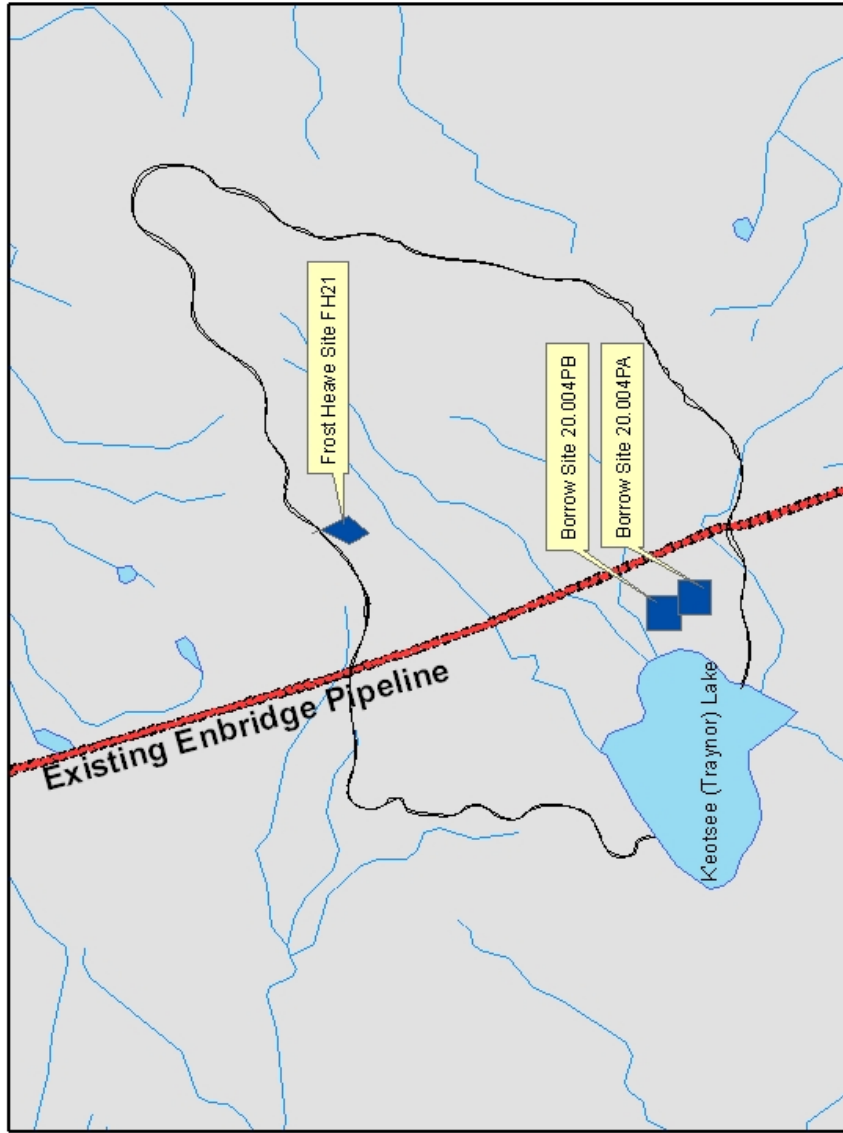
This is not a legal document. For illustration purposes only. Sites not to scale. Locations are not exact. For more information contact the Mackenzie Valley Environmental Impact Review Board at (867) 766-7050.

Created February 7, 2005

**Legend**

- existing pipelines
- rivers
- lakes
- K'eotsee Lake watershed

**Note:** The existing (Enbridge) pipeline right-of-way indicated here approximately coincides with the location of the proposed Mackenzie Gas Project and the proposed locations of the Imperial Deh Cho Geotechnical Program.



**Note:** The delineation of the K'eotsee Lake watershed in this map is roughly derived from a description given in the confidential Sambaa K'e Traditional Knowledge Study for the Proposed MGP.

In its Closing Statement of Dec. 14, 2004, Imperial states “the detailed information provided at the public hearings has helped Imperial understand the particular cultural and environmental sensitivities the K’ootsee... watershed... Imperial will continue to work closely with the Trout Lake [band] to reduce the impacts of the Program in these areas”.

During the Fort Simpson hearing of Dec. 2, 2004, Dee Brandes of Imperial stated the following:

*The area around Traynor Lake is a concern area for the Community and one that we have sought to pay considerable attention and the measured attention that the Community has asked us to pay to that site. We have made a number of changes as a result and accommodations that have been made jointly with the Community to accommodate some of those concerns specific to the geo-technical program... (W)e continue to work with the community of Trout Lake, recognizing that they are asking us to pay considerable attention to, and make accommodations wherever possible, for any development in that area and we will continue to do so.*

-Fort Simpson Hearing Transcript, p. 85

## **7.2 OTHER SUBMISSIONS**

The Review Board received submissions from the Sambaa K’e First Nation (SKFN) and the Dehguh Alliance Society (DAS) on the issue of proposed work in the K’ootsee Lake watershed. The majority of the evidence on this subject was from the SKFN, submitted in writing and presented at the Nov. 30, 2004 hearing at Trout Lake.

The SKFN has repeatedly stated that all of Imperial’s proposed activities are unacceptable within the K’ootsee Lake watershed, which is of great cultural, spiritual and ecological importance to the people of Trout Lake. The SKFN’s Traditional Knowledge Study of May 2004 refers to the “deep spiritual and cultural connection people have with the lake” (p. 30), and states that the K’ootsee Lake watershed “harbours a rich and diverse eco-system” (p. 31).

The SKFN is also very concerned about any potential contamination of the watershed and lake (SKFN Letter of Sept. 23, 2004; Trout Lake hearing notes). The SKFN’s Traditional Knowledge Study states that SKFN members “are very concerned about protecting the waterways that flow into Sambaa K’e, and therefore want minimal development in the immediate K’ootsee area” (May 2004, p. 31). The area contains nesting sites, sensitive wildlife habitat (including woodland caribou habitat), traplines, fishing areas, traditional camp sites, other special heritage resources and cultural sites, and other features that make it of exceptional significance to the people of Trout Lake. K’ootsee Lake is also a vital spiritual site that plays an important role in creation legends of the SKFN (Sambaa K’e Traditional Knowledge Study, May 2004).

On Sept. 15, 2004 the Review Board issued Information Request 1.9 to the SKFN, asking for details regarding the importance of the K'eotsee Lake watershed to the community. The response included a letter and excerpts from the SKFN Traditional Knowledge Study, submitted under confidential cover to the Review Board from the SKFN.<sup>10</sup>

During the Nov. 30, 2004 community hearing in Trout Lake, the Review Board was told by SKFN representative Peter Redvers that the K'eotsee Lake watershed is the most sensitive watershed along the proposed pipeline route through the traditional territory of the SKFN (Trout Lake Hearing Notes, p. 5). Chief Dennis Deneron further stated that there are sacred areas around K'eotsee Lake that the SKFN do not want disturbed, and that the SKFN doesn't want water quality in the watershed to be diminished in any way (Trout Lake Hearing Notes, p. 7). He made it clear that the community wished the proposed 900 person MGP camp to be moved northeast to an area that drains away from K'eotsee Lake (ibid, p. 8).<sup>11</sup>

In the same hearing, Elder Edward Jumbo stated that the K'eotsee Lake area contains numerous burial areas near the areas used for harvesting and expressed concern about development near the burial sites (Trout Lake Hearing Notes, p. 8).

Throughout the Trout Lake hearing, members and representatives of the SKFN made it clear that they wish to protect the K'eotsee Lake watershed area (e.g., Vick John, Trout Lake Hearing Notes, p. 6). The DAS supports this, stating "(a)t the Trout Lake Hearing, the SKFN presented its case for why the K'eotsee Lake watershed is an important area for the community that must be protected. The DAS supports the SKFN on this issue and urges the Review Board to issue a decision that respects the community's position" (DAS Closing Statement, Dec. 9, 2004, p. 9). In the DAS technical report of Nov. 26, 2004, the K'eotsee Lake watershed is identified as an important spiritual area for the SKFN, and categorized as an area important to the well-being of communities.

In its September 28, 2004 letter to the Review Board, the SKFN describes how it has met repeatedly with Imperial to attempt to resolve its K'eotsee Lake concerns, and how it had community harvesters visit the area with representatives of Colt KBR (Imperial's sub-contractors for the geotechnical program) to attempt to identify alternative sites.

The Sambia K'e First Nation has specified that it is particularly concerned with possible future development of a 900 person MGP camp, storage facility, gravel sites and water use in this area (Sept. 28, 2004, SKFN letter). This is seen as a likelihood if the MGP proceeds, and the community views the MGP as a project made possible by the current geotechnical program.

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<sup>10</sup> Imperial was already in possession of this report, which formed a part of the record considered by the Review Board. It was not distributed, pursuant to the agreement between the Review Board and the SKFN.

<sup>11</sup> The SKFN written submission states that this alternative area is approximately 20km north of the present camp location.

During the Trout Lake hearing, the community expressed concerns about Imperial's practices on the land, saying that experience has shown the SKFN that "sometimes what a company says and actually does on the land is different". SKFN representatives stated that the community's original position was that there should be no borrow sites in the watershed, and it continues to be very concerned. However, considering the risks inherent in adopting an all-or-nothing position, the community was willing to consider allowing the investigation of borrow sites in the K'eotsee Lake watershed, but only if the SKFN can assume long-term responsibility for the development of any sites, so that the community itself may ensure that all development is done in a manner respectful of the environment at and around K'eotsee Lake. The SKFN specified that this condition does not apply to the borrow site investigations, but applies to any subsequent development of those borrow sites (Trout Lake Hearing Notes, pp. 16, 22).

When asked by the Review Board to explain the change in the community's position on borrow site locations, SKFN representative Peter Redvers explained that if the community develops borrow sites using its own resources and under its own control, only then could it feel certain that development would be undertaken in a way that is respectful for the spiritual, cultural and ecological importance of the area to the SKFN. This is partly because of the belief that the developer does not have a real understanding of the value of the watershed, and the mistrust associated with this belief (Trout Lake Hearing Notes, p. 24). Mr. Redvers went on to describe that it is important to the community that the issue of K'eotsee Lake and community wishes regarding it be clearly reflected on the record for consideration in future (MGP) hearings (ibid, p. 24). The SKFN maintains its recommendation that the Imperial Deh Cho Geotechnical Program include an assessment of other sites to the north of the K'eotsee Lake watershed for the proposed camp and other MGP facilities (ibid, p. 23).

### **7.3 REVIEW BOARD'S ANALYSIS AND CONCLUSIONS**

The Review Board accepts the importance of K'eotsee Lake and the K'eotsee Lake watershed to the people of the Smbaa K'e First Nation. Through the written record, including the SKFN Traditional Knowledge Study and the community hearings, it has been demonstrated to the satisfaction of the Review Board that this area is vital to the cultural and spiritual well-being of the people of Trout Lake. The Review Board's conclusion is reached due to the presence of numerous heritage sites, harvesting areas, camps, cabins, fishing areas and traplines, and in recognition of the community's demonstrated spiritual connection to the land around K'eotsee Lake.

The Review Board is satisfied, based on the SKFN Traditional Knowledge Study and evidence presented in the Trout Lake hearing, that the K'eotsee Lake area is also important and sensitive ecologically, due to the presence of wildlife denning and nesting sites, as well as providing habitat for woodland caribou (a species at risk under the *Species at Risk Act* - see section 11 of this Report). The SKFN and community members

emphasized throughout the community hearing that maintaining pristine water quality in the K'eotsee Lake watershed is of great importance.

The Review Board notes that there was an issue regarding the adequacy of Imperial's investigation of alternative sites to those proposed in the K'eotsee Lake watershed. The SKFN stated in its written submission of Nov. 30, 2004 that "it is not clear whether Imperial has made a concerted effort to identify alternate sites" (SKFN Issues and Position Paper, p. 2). This point was also raised during the Trout Lake hearing, when SKFN representative P. Redvers stated that "the community is wanting strong assurance from Imperial that they are in fact still pursuing alternative sites, and that means during the geotechnical program, to see whether sites north of the site will be appropriate or necessary" (Trout Lake Hearing Notes, p. 16).

Imperial responded in part to these concerns in the Wrigley hearing (Dec. 1, 2004), where Jim Hawkins stated that Imperial has looked at two sites proposed by the SKFN near K'eotsee Lake. One of these was dropped for not having good borrow materials, and the other (site 20.004c) was added to the program. In the Fort Simpson hearing (Dec. 2, 2004), Mr. Hawkins stated:

*The types of sites that we're looking for in that area are sources of gravel. The gravel is where the gravel is. We can't move it. So we need to look for gravel and -- and find it where we find it.*

*In that particular area it appears that gravel sources are hard to come by... And so we will do our best to investigate the sites in a responsible manner, in close consultation with the community, so that any of the activities we conduct in looking for this gravel, are conducted in a manner that the community supports.*

- Fort Simpson Hearing Transcript, p. 70

The Review Board notes that the SKFN recognizes that there aren't many potential borrow areas along the MGP route, as stated in its Nov. 30, 2004 written submission: "Acknowledging the shortage of gravel in the corridor area... the SKFN is willing to consider the two borrow pits to the east of K'eotsee" (SKFN Issues and Position Paper, p. 2).

Although the Review Board heard many concerns from the community about Imperial's plans for the K'eotsee Lake watershed, the majority of these concerns related to the MGP and its facilities. On several occasions on the record, community members expressed concern over the proposed 900 person camp, fuel storage, and other MGP components.

In the opinion of the Review Board, most of the concerns expressed by the SKFN regarding K'eotsee Lake relate to MGP components. As described in section 5.2, the Review Board considers these to be reasonably foreseeable future developments, and will



consider them here only in terms of the cumulative effects they might contribute to those of the proposed geotechnical work.

The community of Trout Lake expressed concerns about the impacts associated with the cumulative total of developments that may occur in the K'eotsee Lake watershed, not just about this one specific development. Based on what it has heard about the socio-cultural importance of the area, and the evidence on the record, the Review Board finds that the cumulative impacts of the proposed development in combination with reasonably foreseeable future development is likely to cause significant adverse socio-cultural impacts, but this significance can be prevented with the imposition of measures.

Although the cumulative impacts of the geotechnical work in combination with the reasonably foreseeable future developments are significant, most of that significance is due to the proposed MGP, and not to the geotechnical work. The geotechnical work is of a much shorter duration, much less intrusive, and, with proper monitoring and management (as described by the mitigations committed to by Imperial, and with the other measures recommended by the Review Board in this report), has a lesser risk of affecting the watershed than the MGP. For this reason, the Review Board does not feel that there is sufficient basis for excluding all geotechnical activities in the K'eotsee Lake watershed as initially requested by the SKFN.

In considering appropriate measures and suggestions, the Review Board notes the commitments of Imperial regarding the K'eotsee Lake watershed. Imperial had committed to locating alternatives to site 20.004PA during the 2004 summer reconnaissance, and has done so. Imperial has moved the proposed pipeline route 2.5km east, to take it farther away from K'eotsee Lake, in response to TK information and concerns from the SKFN. Imperial has committed to working closely with the SKFN to reduce impacts of the geotechnical program in the K'eotsee Lake watershed and to accommodate the SKFN's concerns wherever possible.

The Review Board finds that the significant social and cultural impacts of the Imperial Deh Cho Geotechnical Program on the people of the SKFN, in relation to the K'eotsee Lake watershed, can be prevented by a combination of the developer's commitments and measures and suggestions prescribed by the Review Board, as outlined below.

## **7.4 MEASURES AND SUGGESTION**

### **Measure 1**

In order to prevent significant adverse environmental impacts from the geotechnical work on the K'eotsee Lake watershed and to prevent significant social and cultural impacts on the people of Trout Lake, community environmental monitors and an Elder, all from Trout Lake (along with translators as needed), must be present for all site investigations in the K'eotsee Lake watershed, to provide guidance in the avoidance of heritage sites and to provide the community with reassurance that Imperial is exercising due diligence regarding environmental precautions in its Deh Cho Geotechnical Program.

### **Measure 2**

In order to prevent significant adverse environmental impacts from geotechnical work on K'eotsee Lake and watershed, Imperial must locate any alternate geotechnical sampling sites as far to the northeast as possible, within the boundaries of the Mackenzie Gas Project development corridor, in order to maximize the distance between geotechnical sites and K'eotsee Lake.

### **Measure 3**

In order to mitigate the significance of the cumulative impacts of the geotechnical work in combination with reasonably foreseeable future developments, the NWT Protected Area Strategy Secretariat (PAS) and the Sambaa K'e First Nation (SKFN) shall within the next 12 months enter into discussions regarding the SKFN's interest in seeking protected area status for the K'eotsee Lake watershed.

### **Suggestion 1**

The Joint Review Panel for the Mackenzie Gas Project should take careful note of the high cultural, spiritual, social and ecological importance of the K'eotsee Lake watershed when assessing the Mackenzie Gas Project, including the conditions that the SKFN set out for borrow pit development in the K'eotsee Lake watershed.

## 8 Road Issues

The majority of road issues were related to the Trout Lake winter road although safety issues on the Highway 1 and the Highway 1 winter road were raised as well.

One of the proposed camps for the Imperial Deh Cho Geotechnical Program is located on the Enbridge pipeline right-of-way, approximately three kilometers southeast of the intersection of the Trout Lake winter road and the Enbridge right of way. Imperial workers and contractors must travel along a portion of the Trout Lake winter road in order to reach the proposed camp. Two of the issues that arose regarding the Trout Lake winter road were safety risks to road users, and necessary road improvement and maintenance resulting from heavy vehicle use.

Item H-1 in the Review Board's Terms of Reference required the following information:

*H-1 Economic Impacts: Describe potential direct and indirect economic impacts of the development on communities... Provide an assessment of potential impacts to community and regional infrastructure (including but not limited to all-weather roads, winter roads [including the Samba K'e winter road]...*

Information Request 2.12, proposed by the Dehgh Alliance Society (DAS), focused on anticipated changes in traffic speeds and volume along sections of road including the Trout Lake winter road.

### 8.1 IMPERIAL'S SUBMISSIONS

In its Nov. 11, 2004, response to Information Request 2.12, Imperial indicated that the Trout Lake winter road from the intersection of the Mackenzie Highway to its intersection with the Enbridge right-of-way was one of the roadways that would experience the majority of vehicle traffic resulting from the Imperial Deh Cho Geotechnical Program. Imperial indicated that most of the traffic would be pick up trucks, but that the project would also include some heavy vehicles (a fuel truck, low-boys, a water truck, a hydrovac truck, etc.). Vehicles on the Trout Lake winter road would travel at a maximum speed of 35km/h for light vehicles and 17.5 km/h for heavy vehicles.

The Trout Lake winter road is maintained by Samba K'e Development Corporation on a fixed-value GNWT Department of Transportation (DOT) contract. The SKFN is concerned that traffic from the geotechnical program will significantly increase costs of road maintenance, and reduce the winter road season due to damage (Trout Lake Hearing Notes, pp. 16-17; DAS Technical Report Nov. 26, 2004, p. 12). The Department of Transportation, in response to the Review Board's Information Request of Dec. 10, 2004,

stated that maintenance costs would likely increase and committed that the additional funds would come from its operations and maintenance budget.

Some of the safety issues are linked to road maintenance issues. Improvements in the road standard to accommodate the program traffic would reduce the threat to the safety of community traffic. Early in the environmental assessment, Imperial was noncommittal about funding additional road maintenance requirements due to the geotechnical program. In response to Information Request 2.10a, Imperial wrote that it “understands that there might be two levels of maintenance programs by the Government of the Northwest Territories Department of Transportation. One will be normal maintenance and the other might address maintenance resulting from additional use of the winter road as a result of program activities”.

In the Fort Simpson hearing of Dec. 2, 2004, Jim Hawkins of Imperial made the following statement and commitment:

*There are a number of different ways to provide warning to oncoming traffic of equipment moving. Another approach that we've typically used is to provide pilot vehicles in advance of our movement of equipment, a small pickup truck type of thing with signage and flags to identify areas where traffic could pull over and -- and safely pass well in advance of our movement.*

*In addition, we've also, from time to time, had situations where we've asked the communities if there was a -- a window of opportunity where we could actually close down a stretch of road to allow us to move a series of equipment in and so as to not impact them and -- and schedule that at a time period when we would expect low use by the Community of that road.*

*There's a number of different approaches that we have used in the past and... [we] certainly would use [for the] Trout Lake Road. I... had the same impression that the Board did with respect to how narrow some of those stretches are and the restricted visibility.*

-Fort Simpson Hearing Transcript, p. 69

Jim Hawkins further stated:

*...(T)ypically our practice has been where Imperial needs to make improvements to roadways in order to conduct its activities, we recognize that those are costs that properly flow to our account... We do understand that conducting activities like icing down roads to provide a safer, more secure means for moving our equipment, repairing any damage that we may do to the roads, is our responsibility and indeed we will bear the financial costs of that.*

-Fort Simpson Hearing transcript, pp. 192-193

With respect to all roads used for the project, Jim Poplin of Imperial stated the following in the Fort Simpson hearing on Dec. 2, 2004:

*In the other locations where we worked, where we have moved equipment, we've done that in conjunction with DOT [Department of Transportation] and with other contractors, other road users. Typically, if we're moving heavy equipment and there's traffic behind us, we pull over to the side and let that traffic pass. We do not restrict traffic... The equipment that we're moving is not on a – the heavy equipment is not on a steady basis either, it's kind of a one time event, or several time event, versus everyday.*

*So after it's moved, it's typically off the road for a period of time, and it wouldn't be obstructing traffic. And most of the normal traffic on a daily basis then would be light vehicle traffic, like four wheel drive pickup trucks, and things like that, as opposed to -- to heavy equipment. We certainly maintain strict speed controls when we're moving our equipment, typically much slower than... what's allowed, legal limits, and we, where possible, communicate with other road users that have radios and other equipment to enhance safety.*

-Fort Simpson Hearing Transcript, pp. 62-63.

## **8.2 OTHER SUBMISSIONS**

In the Nov. 30, 2004 Trout Lake hearing, some of the safety issues regarding the Trout Lake winter road were described in a slide presentation by Doug Bryshun of the Samba K'e Development Corp., who stated that there is a legitimate safety concern for the following reasons (Trout Lake Hearing Notes, pp. 16-18):

- The road is very narrow in many areas. Often the road is just wide enough for one vehicle, and passing a large vehicle would be very difficult. There are no pull outs for many kilometres and people have to back up for long stretches on the narrow snow-based road to allow for oncoming traffic.
- The road also has many blind corners with extremely low visibility and blind hills where eskers are crossed.
- There are major creek crossings with overflow and ice on the surface.

Mr. Bryshun stated that the road would need upgrading from a snow-based road to an ice road, improved bridges, widening for safe passage with improved visibility, and rebuilding to “industry standard” in order for the geotechnical program to use it. He also requested a system for warning community traffic of oncoming industrial traffic (Trout Lake Hearing Notes, pp. 16-18).

The DAS raised these issues again in Fort Simpson adding that “without a commitment from Imperial and Department of Transportation to significantly upgrade and widen those roads, not only are we going to expect [Imperial] traffic to slow down on the Trout Lake

winter road, but we expect them to stop and pull over and let public traffic pass them by” (J. Acorn, DAS, Fort Simpson Hearing Transcript, p. 124).

At present, the SKFN is provided funding by the Department of Transportation to maintain the winter road. The SKFN has expressed concern at several points during the environmental assessment that it does not have an adequate contract to provide the upgrades and maintenance that safety on a road with industrial traffic would require (e.g., D. Bryshun, Trout Lake Hearing Notes, pp. 16-18; SKFN Presentation Outline, Nov. 30, 2004).

The Review Board issued Information Request 2.10 to the Department of Transportation on the subject of additional maintenance costs resulting from this program. In the Trout Lake hearing on Nov. 30, 2004, the accuracy of the response received from the DOT was questioned by the SKFN. As a result, an additional Information Request was issued by the Review Board to the Department of Transportation following the hearings, on Dec. 6, 2004.

In response, the Department of Transportation stated:

*At the fall meeting... Imperial Oil agreed to provide additional maintenance on the Trout Lake Winter Road in conjunction with DOT's existing maintenance contractor, the Saamba Ke Band. The Department of Transportation has also committed up to \$50K from our existing O & M budget for right-of-way enhancements, i.e. clearing and widening. The Department believes that these measures will mitigate the impacts of this project and that the specific recommendations of the SKFN are not warranted. As a contingency, the Department of Transportation will have a 18 metre portable bridge available for use along the Trout Lake winter road if required.*

-DOT IR Response, Dec. 10, 2004

Regarding any additional work required, the DOT stated the following:

*Although the contract with the Saamba K'e Development Corp. for the construction and maintenance is a fixed lump sum contract there are provisions for additional work. Any work not specified in the contract will be handled by Contract Change Order and paid for accordingly.*

-DOT IR Response, Dec. 10, 2004

With respect to the (all-weather) Highway 1 and the Highway 1 winter road, the DAS described its concerns in its Technical Report of Nov. 26, 2004. In it, the DAS stated that it remained concerned about project traffic and asked that project traffic slow down when approached by other traffic if it is safe to do so.

*People living in the Deh Cho region routinely have to deal with large trucks traveling on narrow, poor-quality roads. In the winter, poor visibility due to swirling snow can be an additional problem. For those people traveling behind these trucks, it is difficult to pass the trucks. For those people heading towards these trucks, they frequently have to get on the shoulder of the road to avoid an accident. Stories of people having to hit the ditch are far too common.*

-DAS Technical Report, pp. 10-11.

### **8.3 REVIEW BOARD'S ANALYSIS AND CONCLUSIONS**

Based on the written record and the information presented at the hearings the Review Board finds that the Trout Lake winter road in its present state is neither safe nor adequate for use by both industrial and community traffic. The Review Board has considered the proposed industrial usage of the Trout Lake winter road by Imperial for this geotechnical program, and it concludes that the road can not be used as proposed without safety problems arising. The Review Board thus finds that the Imperial Deh Cho Geotechnical Program would result in a significant adverse social impact related to traffic safety on the Trout Lake winter road. However, this significant impact can be prevented by a combination of all of the following:

- 1) The commitments of the GNWT Department of Transportation, in assuring adequate funding for SKFN to maintain the road in a safe manner (consult Appendix C2);
- 2) The commitments of Imperial to use the described methods of assuring traffic safety around industrial traffic;
- 3) A Review Board measure dealing with providing warnings to users of the Trout Lake winter road; and
- 4) A Review Board measure dealing with Imperial employees' and contractors' driving practices when approached by other road users.

## **8.4 MEASURES**

### **Measure 4**

In order to prevent a significant adverse social impact on the community of Trout Lake due to traffic safety risks arising from the Imperial Deh Cho Geotechnical Program, Imperial must meet with the SKFN and discuss the specific techniques Imperial will use to inform and warn community road users of industrial traffic. Based on this meeting, Imperial shall implement appropriate methods which will, at a minimum, include small advance vehicles with signage and flags and warning the community road users of the time periods of major industrial road usage. This meeting shall occur prior to work beginning in areas where the Trout Lake winter road is utilized by Imperial employees and/or contractors.

### **Measure 5**

In order to prevent significant adverse social impact on road users in the Deh Cho region resulting from increased risks when sharing roads with industrial traffic, the MVLWB shall, prior to the issuance of any land use permits for the Imperial Deh Cho Geotechnical Program, require Imperial to submit a detailed policy requiring that heavy vehicles supporting the Imperial Deh Cho Geotechnical Program yield to public traffic, where safe to do so, on Highway 1 and the Highway 1 winter-road. Imperial shall ensure that the terms and conditions in any contracts let for the Imperial Deh Cho Geotechnical Program make compliance with this policy mandatory.



## 9 Community Environmental Monitors

The details surrounding the use of community members as environmental monitors for the geotechnical work has been an ongoing issue in this environmental assessment. In its *Terms of Reference*, the Review Board requested the following:

*I-6 Environmental Monitoring and Follow-up: Describe Imperial's proposed environmental monitoring, including wildlife monitoring, and follow-up programs.*

### 9.1 IMPERIAL'S SUBMISSIONS

Imperial's DAR describes the role of the Community Environmental Monitors. The monitors will inspect proposed access routes and "provide local knowledge and advice to mitigate any damage to environmentally sensitive areas such as traplines, archaeological and heritage sites, watercourses and conservation areas". The monitors will also provide information about wildlife habitat and movements and participate in post-construction assessment (DAR 5.5, p. 5-30).

On Dec. 2, 2004, in response to a request from the Trout Lake Hearing of Nov. 30, 2004, Imperial submitted to the Review Board a document detailing the selection, roles, training and activities of Community Environmental Monitors in the Gwich'in Settlement Region as an example of its practices in other regions. This document clearly described the monitor as employed by and reporting directly to the Aboriginal organization (in this case, the Gwich'in Renewable Resources Board).

### 9.2 OTHER SUBMISSIONS

The written submission of the SKFN (Nov. 30, 2004) provided insight into Trout Lake community expectations of Community Environmental Monitors for the Imperial Deh Cho Geotechnical Program. The SKFN identified a need for baseline research as a frame of reference for assessing future impacts, particularly about woodland (boreal) caribou and water quality. The SKFN recommended that training of Community Environmental Monitors be undertaken by industry and/or government at least 30 days prior to the beginning of geotechnical work, and also requested that two or three Community Environmental Monitors be contracted by Imperial for at least 10 days prior to the program to scout the area to be used for the program and to document caribou tracks and sightings. The SKFN recognized that ongoing baseline studies are required before the MGP, but made these specific recommendations in consideration that this geotechnical program is of a short duration.

The notes of the Trout Lake Hearing describe statements by Peter Redvers, consultant to the SKFN, regarding the subject of Community Environmental Monitors:

*This community has held one position ever since they first sat down with Imperial over a year ago. Experience has shown us that sometimes what a company says and actually does is different. The only way they can truly know what is actually happening is for community members to go out as environmental monitors and can report back to the community on what is actually happening. The community is concerned both about environmental monitoring during actual work activities. The community is also very concerned there be some baseline information established before industrial activities on land, whether the changes observed are natural or whether they are caused by that short program.*

*The community is committed to long term environmental monitoring in part to establish baseline data and is working with RWED ... to start establishing some baseline information along with TK information that can track environmental changes over a long period of time. The community in discussions yesterday recognized the winter works of the geotechnical program is very short and there is not enough time for long term baseline studies before the activity is proposed to begin. Imperial, it appears, has agreed to use environmental monitors hired by Samba K'e. The training of those monitors still needs to be addressed. So the community's position has been these monitors are independent, report to Samba K'e, and are provided with adequate training prior to start of work. The community wants them to go out into field at least 1 month before the start of any work activity<sup>12</sup> to get information about what's there, especially regarding woodland caribou, before and after the geotechnical work to establish if there have been any impacts.*

-Trout Lake Hearing Notes, p. 15

Pehdzeh Ki First Nation (PKFN) representatives expressed similar interest in having Community Environmental Monitors conduct field observations of baseline conditions in advance of the geotechnical work. Kelly Pennycook, PKFN Land and Resource Officer, stated:

*"[The] PKFN requests that environmental monitors be used in any sites, and that they be working in the development site well before, during and after the proponent is there. Monitoring results should be reported directly and only to Chief and Council. We suggest the proponent provide and make available adequate training for environmental monitors"*

-Wrigley Hearing Notes, p. 8

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<sup>12</sup> The written and verbal submissions from the SKFN conflict over the amount of advance time requested in the field for community monitors to conduct baseline observations. It was later verified (personal communication, P. Redvers, Dec 21, 2004) that the community is requesting a minimum of 10 days of advance field time, as stated in the written submission, and not 30 days of advance field time, as stated in the verbal presentation.

The Dehgha Alliance Society supported all recommendations that the SKFN and the PKFN made regarding Community Environmental Monitors, arguing that these recommendations should apply to all DAS communities. The DAS also requested more resources for training community members to be Community Environmental Monitors (DAS Technical Report, Dec. 9, 2004; Fort Simpson Hearing Transcript pp. 127-128).

### **9.3 REVIEW BOARD'S ANALYSIS AND CONCLUSIONS**

The Review Board notes that the SKFN, the PKFN and the DAS have all requested that there be an opportunity for Community Environmental Monitors to conduct field observations in advance of the program, in lieu of having adequate baseline information available. Boreal caribou have been particularly identified as a Valued Ecosystem Component about which the lack of information is of concern. The Review Board has recognized the lack of detailed baseline information on wildlife available in the Deh Cho region, and is particularly concerned with the lack of information available on:

- Boreal (woodland) caribou, a species both at risk and very important to communities in the Deh Cho region; and
- Moose, which constitute an important source of economic and subsistence value to area community members.<sup>13</sup>

The Review Board notes that, in other regions, Imperial already conducts training for Community Environmental Monitors. Considering the short duration and relatively non-invasive nature of the proposed Imperial Deh Cho Geotechnical Program, the description of the duties and the training provided by Imperial in other regions, the Review Board is of the view that the additional training suggested by the DAS and others is not essential to prevent significant impacts from the geotechnical work. The Review Board finds that training of community environmental monitors in the Deh Cho will be adequate if it is based on the same training process used by Imperial in the Gwich'in Settlement Region.

The Review Board is however, of the view that the advanced field observation work proposed by first nations will help to prevent significant adverse environmental, social and cultural impacts from the geotechnical program in the areas surrounding geotechnical works and on nearby communities. This will better enable Community Environmental Monitors to perform their duties and will result in better environmental management of the geotechnical program. The ten days of advance field study requested by the SKFN is, in the view of the Review Board, a reasonable request for a development of this nature.

The Review Board finds Community Environmental Monitors for the Imperial Deh Cho Geotechnical Program will serve an important role in anticipating and preventing environmental, social and cultural impacts. Community Environmental Monitors can be instrumental in avoiding or reducing undesirable effects on wildlife, sensitive areas and

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<sup>13</sup> Please see section 11 of this report for the Review Board's further consideration of impacts on boreal caribou and moose.

heritage sites, while providing communities with direct involvement in the program in order to alleviate community concerns. Monitors can do so by improving environmental monitoring of the geotechnical program, and improving Imperial's understanding of baseline conditions. This will enhance the recognition and evaluation of impacts so that Imperial can better manage its activities on the land. The fact that community members will be present in the field directly observing pre-existing conditions and all geotechnical activities will help to address community concerns; e.g., the SKFN's lack of trust in Imperial to conduct its activities in a manner that is appropriately respectful of the environment in the K'eotsee Lake watershed.

Although the Dehghah Alliance Society has requested that Community Environmental Monitors be hired from all six of its member communities, the Review Board notes that only the Sambaa K'e, the Pehdzeh Ki and the Ka'a'Gee Tu First Nations have specifically requested them in this environmental assessment. Based on the evidence on the record and presented in the hearings, the Review Board recognizes the greatest need for Community Environmental Monitors from the Sambaa K'e and the Pehdzeh Ki. The Sambaa K'e and the Pehdzeh Ki First Nations are more directly affected by the program and voiced important concerns in this assessment. However, acknowledging that the watershed of the Kakisa River is important to the Ka'a'Gee Tu First Nation, the Review Board would like the Ka'a'Gee Tu First Nation to benefit from Community Environmental Monitors as well.

The Review Board has determined that, to prevent significant adverse cumulative biophysical, social and cultural impacts to the K'eotsee Lake and Blackwater River watersheds and to the people of Trout Lake and Wrigley, and to improve environmental management of the cumulative impacts of the geotechnical program in combination with those of reasonably foreseeable future developments, the following measure is required. In addition, public concern from other Deh Cho communities, related to the local effects of the Imperial Deh Cho Geotechnical Program, will be reduced by the imposition of the two suggestions made below.

## **9.4 MEASURE AND SUGGESTIONS**

### **Measure 6**

The MVLWB must not issue permits or licenses for the Imperial Deh Cho Geotechnical Program until receiving a letter from Imperial making a commitment to fund the Pehdzeh Ki First Nation and the Sambiaa K'e First Nation to hire their own Community Environmental Monitors. The letter must also include the following additional commitments:

1. This program will be similar to that conducted by Imperial in the Gwich'in Settlement Area, and set out similar roles, training and involvement for the Community Environmental Monitors; and
2. This program will include funding for a minimum of ten days of field observation by the Community Environmental Monitors, to determine existing biophysical conditions, in advance of the geotechnical program.
3. Any reports of findings from advanced field observations by Community Environmental Monitors will be considered by Imperial in the planning and management of the subsequent geotechnical work.

### **Suggestion 2**

The Sambiaa K'e First Nation (SKFN) should, when choosing Community Environmental Monitors for parts of the Imperial Deh Cho Geotechnical Program in areas traditionally used by both the SKFN and the Ka'a'Gee Tu First Nation (KGTFN), strive to hire an individual (or individuals) also acceptable to the KGTFN.

### **Suggestion 3**

Imperial should consider funding the hiring of Community Environmental Monitors by each of the four other affected first nation/aboriginal groups (the Ka'a'Gee Tu First Nation, the Liidlii Kue First Nation, the Jean Marie River First Nation, and the Metis Nation Local 52), for the geotechnical work to be done in their respective areas.

## 10 Ongoing Traditional Knowledge Studies

Imperial has funded Traditional Knowledge (TK) studies for Deh Cho communities along the route of the MGP. Although part of the SKFN and PKFN TK studies have been submitted as evidence during this EA, other community TK studies are not yet complete. An issue has arisen during this environmental assessment regarding how the unfinished TK studies may influence the design and execution of the Deh Cho geotechnical program.

TK studies are important sources of information that the Review Board required in the *Terms of Reference* for the Developer's Assessment Report, as the following examples show:

*H-5      **Traditional Land Use:** Discuss the potential impacts of the proposed development on traditional land use and occupation. Describe in detail the concerns raised by land users and the commitments of Imperial regarding compensation for trappers and all other traditional harvesters. Describe detailed mitigations to minimize or avoid those impacts.*

*I-3      **Wildlife and Wildlife Habitat:** Discuss the potential impacts of the proposed project on boreal (woodland) caribou and moose, and their habitat in the project area. Include discussion of the effects of direct disturbance of the activity (including overflights), increased access, and wildlife responses to disturbance and cutlines. Incorporate traditional land use and Traditional Knowledge (such as the Smbaa K'e Traditional Knowledge Study) in your analysis.*

On Oct. 26, 2004, the Review Board issued an Information Request proposed by the DAS, asking Imperial to explain how Imperial will incorporate the recommendations of unfinished TK studies into the design of the Imperial Deh Cho Geotechnical Program.

### 10.1 IMPERIAL'S SUBMISSIONS

In its Developer's Assessment Report, Imperial described its efforts to identify relevant TK, and provided an example of how TK has directly influenced program design and planning in relocating the site from the hill of *Shihndaakaa Tselaa* (DAR s. 9.4, p. 9-14).

In its November 11, 2004 response to IR 2.21, Imperial stated:

*...Input from the TK studies that have been completed to date has been integrated into the design of the Program. Input from any other studies will be integrated into the Program design on an ongoing basis. To the extent possible, the Program will be revised to integrate information from the TK studies as it becomes available.*

A letter from the SKFN submitted on Sept. 23, 2004 states that, in response to TK reports and maps from Trout Lake, Imperial has already moved the MGP corridor eastward 2.5 km away from K'eotsee Lake.

## **10.2 OTHER SUBMISSIONS**

The DAS acknowledged progress working with Imperial on TK studies, and has seen some changes in development planning as a result. The DAS also pointed out the TK studies of communities other than the SKFN are at different stages of completion. The position of the DAS was summarized by consultant Joe Acorn in the following statements, from the Fort Simpson hearing of Dec. 2, 2004.

*Some of them have just barely started, others are farther along, such as the LKFN [Liidlii Kue First Nation] where they're at the point of producing some draft maps...*

*Our preference would be that this EA process not be concluded until the TK studies are complete. The Board saw yesterday, or saw in Trout Lake, the value that these TK studies can have in shaping these projects and if this EA is finished before the other TK studies are concluded, the opportunity to influence this project will effectively be lost...*

*The recommendation that's put forward in our technical report is that Imperial Oil is not to do any work on this project that violates the recommendations that will be made in the unfinished TK studies by LKFN, Fort Simpson Metis, PKFN, Jean Marie River First Nation and Ka'a'Gee Tu First Nation.*

-Joe Acorn, Fort Simpson Hearing Transcript, p. 118

In its Dec. 9, 2004 Technical Report, the DAS stated “as there is some uncertainty as to when the five TK studies will be completed, the DAS understands that keeping the EA open is problematic” (p. 16).

In the Fort Simpson hearing, the DAS described another complicating factor regarding the sharing of information from TK studies - that the provision of TK information by communities is partly related to Imperial's willingness to enter into negotiations for Access and Benefits Agreements. Joe Acorn of the DAS stated:

*[F]rom the very beginning, Wrigley has been very clear that before they would discuss project specifics, they wanted a Memorandum of Understanding in place between the Community and the Company on how consultation would occur, on how harvesters would be compensated and on how contracts would be awarded and how benefits would accrue to the community.*

*The Community is not going to provide specific information ... and they're not going to help Imperial along in this process when Imperial is not, on the other hand,*

*making agreements with the communities. There's a definite process in place. They have to come to an agreement with the communities first and then you'll get the specifics. That's what the Community's been saying from the beginning.*

*Yesterday, the specifics were finally provided because the Community feels now their backs are against the wall. This Hearing was their last opportunity in which they could finally try to influence this project before the Board makes its decision. The Community did not want to provide that information yesterday, but they had felt they had to.*

-Fort Simpson Hearing Transcript, pp. 42-43

### **10.3 REVIEW BOARD'S ANALYSIS AND CONCLUSIONS**

The Review Board has noted Imperial's demonstrated willingness to incorporate changes to development design as a result of TK. As an example, it has noted the removal of geotechnical site 20.003P from *Shihndaakaa Tsela*, a culturally significant site identified by the SKFN TK Study..

The Review Board holds a high respect for Traditional Knowledge and has always been a strong advocate of its value and use in Environmental Assessment. The Review Board endeavored to give TK full consideration in this environmental assessment. However, if the Review Board were to support the position of the DAS (that Imperial is not to do any work that violates the recommendations of the unfinished TK studies) the Review Board would be binding Imperial to recommendations that do not yet exist. The Review Board does not find this to be a reasonable request.

The Review Board also notes that the DAS described the withholding of TK information from Imperial until the last moment as a technique intended to provide leverage for entering into benefit agreement negotiations. An unfortunate side effect was that much TK was not shared early on and there will be less opportunity for TK to influence the design and planning of the Imperial Deh Cho Geotechnical Program.

The Review Board recognizes that the information from the TK studies of the SKFN and the PKFN has been a valuable and important source of evidence for this environmental assessment. The Review Board continues to encourage and support the discussion and consideration of TK studies from other communities in the design of the geotechnical program to the extent possible.

As stated above, Imperial has committed that "input from any other studies will be integrated into the Program design on an ongoing basis" and that "[t]o the extent possible, the Program will be revised to integrate information from the TK studies as it becomes available" (Response to IR 2.21, Nov. 11, 2004). The Review Board notes that when Imperial moved its proposed pipeline route 2.5km east away from K'eotsee Lake in response to TK information, it demonstrated its openness to revise development plans as



a result of TK knowledge. This lends credibility to Imperial's commitment to incorporate TK into program design. The Review Board is satisfied that these commitments, in combination with the suggestion below, will address the issue adequately.

#### **10.4 SUGGESTION**

##### **Suggestion 4**

To ensure that there is opportunity for Traditional Knowledge studies from the Liidlii Kue First Nation, the Metis Nation Local 52, the Pehdzeh Ki First Nation, the Jean Marie River First Nation and the Ka'a'Gee Tu First Nation to influence development design and planning, Imperial should meet with each of these organizations to discuss how to incorporate results of completed Traditional Knowledge studies into the design of the Imperial Deh Cho Geotechnical Program.

# 11 Caribou and Moose

Concerns about impacts on boreal (woodland) caribou (*Rangifer tarandus caribou*) and moose (*Alces alces*) arose in a variety of ways during this assessment. Some have been mentioned in other sections of this report with respect to the K'eotsee watershed and harvesters' compensation issues.

In the *Terms of Reference*, the Review Board included the following item:

- I-3 *Wildlife and Wildlife Habitat: Discuss the potential impacts of the proposed project on boreal (woodland) caribou and moose, and their habitat in the project area. Include discussion of the effects of direct disturbance of the activity (including overflights), increased access, and wildlife responses to disturbance and cutlines. Incorporate traditional land use and Traditional Knowledge (such as the Sambaa K'e Traditional Knowledge Study) in your analysis. Describe proposed mitigations (such as access control or noise reduction) in detail.*

Boreal caribou are a species at risk listed under Schedule 1 of the *Species at Risk Act* (SARA). The Review Board included the following requirement for species at risk in the *Terms of Reference*:

- I-4 *SARA: Pursuant to section 79 of the Species at Risk Act, conduct an assessment of the potential effects of the project on species at risk. This assessment should include: identification of species at risk that may be affected by the project, identification of measures to avoid, minimize, and mitigate potential effects on these species or their habitat, and a proposed approach to monitoring of these effects.*

The Review Board acknowledges its responsibilities under section 79 of SARA, as follows:

*(1) Every person who is required by or under an Act of Parliament to ensure that an assessment of the environmental effects of a project is conducted must, without delay, notify the competent minister or ministers in writing of the project if it is likely to affect a listed wildlife species or its critical habitat.*

*(2) The person must identify the adverse effects of the project on the listed wildlife species and its critical habitat and, if the project is carried out, must ensure that measures are taken to avoid or lessen those effects and to monitor them. The measures must be taken in a way that is consistent with any applicable recovery strategy and action plans.*

The Review Board also issued Information Request 2.24 as follows, to determine the level of increased motorized access as a result of the geotechnical work:

*Imperial Oil says that a high percentage of its secondary access routes will be along existing lines but does not elaborate on the extent of the re-growth on these existing lines. Increasing access to the land is a concern for the communities... For the project as a whole and within each of the protected and withdrawn areas, please provide the percentage of the existing secondary access lines that are currently usable for motorized transportation...*

## **11.1 IMPERIAL'S SUBMISSIONS**

In the DAR, Imperial predicts little impact on caribou resulting from loss of vegetation, but acknowledges that sensory disturbance from noise, vehicle movement, helicopters, digging and excavating equipment, and the presence of humans might change woodland caribou habitat effectiveness. Imperial also predicts that increased access by humans and predators could also change the effectiveness of habitat for caribou. Imperial notes that caribou are not likely to readily habituate to the presence of humans in the area. It predicts the impacts of the geotechnical program to be moderate in magnitude, but short-term in duration. Imperial also predicts that new access routes may increase the accessibility of areas to hunters and predators, and that this could affect caribou movement as well as habitat use (DAR s. 5.1, p. 5-6).

Similar impacts are predicted by Imperial for moose in the project area. The clearing of roads and trails will result in habitat loss, and disturbance will result in lower habitat effectiveness near roads. Increased access by humans and predators will also affect habitat effectiveness for moose. Moose movement and mortality could also be affected by traffic and increased access. Imperial states “the overall impacts of access roads on moose are considered low to moderate in magnitude and short to long-term in duration. Because moderate impacts do not extend into the far future, the program impacts are not considered significant” (DAR s. 5.1 p. 5-6).

During the Wrigley hearing on Dec. 1, 2004, Carl Warner, biologist to Imperial, emphasized the short duration of the work and disturbances, and listed some of the mitigation measures proposed for the development. He stated that Imperial is committed to minimizing the clearing of vegetation by using existing clearings and secondary access, and that only 10% of the program's total clearing will be new. Imperial is also taking steps to promote re-growth of vegetation and is protecting ground cover by working in winter (Wrigley Hearing Notes, p. 18).

In response to Information Request 2.24, Imperial indicated that “All secondary access including existing cutlines and new access will require clearing to some degree... however no quantitative assessment is available” (IR 2.24 Response, Nov.11, 2004).

Item 8.0 of Imperial's Aug. 11, 2004 response to the Review Board's Deficiency Statement included the commitment that “mitigations such as minimum altitude

restrictions and avoidance of large concentrations of wildlife will be in place for this program” (DAR Deficiency Response 8.0).

Imperial has committed to using rollbacks of slash and other best available practices suitable to the locations of the geotechnical work, to mitigate increased access (Fort Simpson Hearing Transcript, pp. 80-81). It also committed to use timber to make drill and pit sites unsuitable for helicopter access, within any restrictions on this required by INAC land use inspectors (Fort Simpson Hearing Transcript, p. 74).

## **11.2 OTHER SUBMISSIONS**

The Dec. 9, 2004 Technical Report by the DAS discusses its concerns regarding caribou and moose. It states that “the two species that are most connected with the Deh Cho traditional way of life are caribou and moose” (p. 16). The DAS is concerned that Imperial’s prediction of no significant impacts on caribou and moose are based on extremely limited baseline information and analysis. For an accurate assessment, the DAS states that more baseline information is required, along with the development of scientifically defensible thresholds for disturbance. Without these, they argue, there is insufficient confidence in Imperial’s predictions (ibid, pp. 16-17).

On Dec. 1, 2004, in the Wrigley hearing, a connection between impacts on moose and harvester compensation was expressed by Wilson Dimsdale, Band Manager for the PKFN, who said

*“The land is what I feed my family with. How do you compensate for that when you are going to be busy, causing disturbances to wildlife, scaring them off, for winters in the most important hunting area?”*

-Wrigley hearing notes, pp.12-13

In the same hearing, PKFN member Mike Neyelle expressed concerns over the community’s observations of drastic changes in moose usage of prime habitat, due to helicopter overflights (ibid, p. 18). The Nov. 27, 2004 written submission by the PKFN lists numerous proposed geotechnical sites where the people of Wrigley have identified important moose and caribou habitat. The PKFN thus declared many sections of these proposed geotechnical sites unacceptable.

In the Fort Simpson hearings, the DAS identified the concern over moose and caribou as a potential cumulative effects issue, linking the Imperial Deh Cho Geotechnical Program with the impacts of the proposed MGP. To respond to a lack of existing baseline information and thresholds regarding caribou and moose, the DAS recommended expanding the range area of caribou examined by the Deh Cho Boreal Caribou Working

Group<sup>14</sup> to include an area roughly centered on the proposed pipeline corridor from the Sahtu border in the north to the Alberta border in the south. The DAS also recommended that the mandate of the working group be expanded to include moose.

*(T)his project is simply one of the first significant incursions onto the land as a result from the Mackenzie Gas project. It's the first of many and we feel the earlier that this group starts its work, the better off we will all be and waiting for the Mackenzie Gas Project applications and the Joint Review Panel would be simply ignoring this responsibility. I think there's sufficient evidence right now to suggest that we need to start establishing disturbance thresholds for the caribou and moose, and identifying exactly how big are these populations, where do they live, what kind of habitat do they have, and how are they being disturbed.*

-J. Acorn, DAS, Fort Simpson Hearing Transcript, p. 119

The DAS also expressed concern in its Technical Report (Dec. 9, 2004) and at the Fort Simpson hearing (Dec. 2, 2004) about increased hunting access by helicopters landing at geotechnical drill and pit site clearings. It requested that Imperial either replant the sites with trees two meters high or use cut trees to build tripods which would render the sites unsuitable for helicopter landing (DAS Technical Report, p. 19; Fort Simpson Hearing Transcript, p. 123). The Liidlii Kue First Nation Chief Keyna Norwegian also expressed concern regarding the impacts of the Imperial Deh Cho Geotechnical Program on wildlife in the Fort Simpson hearing (ibid, p.163), stating “the animals will be scared and so forth, and that’s a known fact that animals do run when they hear machineries in the bush”.

### **11.3 THE REVIEW BOARD’S ANALYSIS AND CONCLUSIONS**

Based on the evidence from the hearings and the written evidence on the public record, the Review Board recognizes the economic, cultural and social importance of boreal caribou and moose to the communities of the Deh Cho. This was initially stated by the DAS and repeatedly asserted by community members during the Review Board’s hearings.

The Review Board accepts Imperial’s prediction that drilling and excavating activities themselves are likely to displace moose from the immediate vicinity surrounding the geotechnical sites for a short period of time. The Review Board also accepts Imperial’s assessment that the total amount of habitat directly disturbed by the footprint of the geotechnical work is not significant. Similarly, the Review Board accepts Imperial’s prediction that the changes in habitat effectiveness (the change in use of the habitat surrounding the project) are temporary in nature and will not have a significant effect on regional ungulate populations.

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<sup>14</sup> This refers to the Deh Cho Boreal Caribou Working Group as described in the recommendation submitted to the Minister of DIAND by the Review Board in its *Report of Environmental Assessment and Reasons for Decision on the Paramount Resources Ltd. Cameron Hills Expansion Project, June 1, 2004.*

The Review Board notes that Imperial found impacts on moose and caribou related to access may extend to the far future (defined by Imperial as “extending more than 30 years after the program” [DAR s. 3.1 p. 3-3]) and that the effect magnitude is anywhere from low to moderate. With respect to moose, Imperial further recognizes that this increased access can affect mortality.

Imperial has committed to using best available practices to mitigate the effects of new access, including the rollback of slash. Although this commitment is important and may help somewhat to reduce the impact, the practical difficulties in ensuring the effectiveness of mitigation to control access are widely recognized in the oil and gas industry.<sup>15</sup> Therefore, the Review Board’s confidence about the likely effectiveness of this mitigation is low.

The Review Board notes that Imperial recognizes that increased access resulting from this geotechnical program will cause increased moose mortality near roads and trails. Imperial also noted that increased access will affect caribou, but gave no prediction regarding increased mortality as a result (DAR s. 5.1 p. 5-6). It is a widely recognized principle of wildlife management that mortality of ungulates increases in relation to increased access<sup>16</sup>, as is reflected in Imperial’s prediction about moose. Given the lack of specific impact predictions from Imperial of increased mortality on caribou, the Review Board concludes that the increased mortality due to greater access is likely to affect caribou in a manner similar to the impacts on moose.

The Review Board also notes flaws in the reasoning behind Imperial’s methodology for wildlife impact predictions. Imperial has predicted the impacts of access to be of a low magnitude, stating “because moderate impacts do not extend into the far future, the program impacts are not considered significant” (DAR s. 5.1 p. 5-6). The Review Board’s *EIA Guidelines* (March 2004) clearly state that in impact predictions, magnitude is a measure of the degree of change expected. Instead, Imperial has made its prediction using magnitude as a measure of how serious a concern the impact is to the Valued Ecosystem Component (DAR s. 3.1 p. 3-3). In the Review Board’s view, significance, not magnitude, is the appropriate measure of how likely an effect is to pose a serious concern to a Valued Ecosystem Component.

The Review Board raised this with Imperial on Sept. 15, 2004, in Information Request 1.3, stating “...Magnitude is not about the seriousness of the concern... Magnitude should measure degree of change from initial conditions. This is particularly relevant since Imperial’s definition of significance hinges on magnitude”. In Information

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<sup>15</sup> E.g. “Reduction of Footprint and Ecological Function: An Approach to Cumulative Effects Management”. Roger Creasy, Senior Environmental Scientist, Shell Canada, presented at *Assessment and Management of Cumulative Environmental Effects of Linear Developments* Conference, March 26, 2002, Whitehorse, Yukon.

<sup>16</sup> E.g. *Boreal Caribou Research Program, 2002 Research Summary* P. McLoughlin, Alberta Research Council (Ed.), U. of Alberta, 2002.

Request 1.3, the Review Board asked Imperial if it wished to revise its predictions accordingly. Imperial's response was that "the use of the term "serious concern" is adequate for the determination of magnitude and, accordingly, the predictions of significance remain unchanged" (IR 1.3B Response, Sept. 29, 2004). The Review Board notes that the onus is on each party, including the developer, to persuade the Review Board of its case, and Imperial was provided with the opportunity to do so with respect to the criteria for wildlife impact evaluation but has not persuaded the Review Board that its prediction is correct.

Further, in Imperial's DAR analysis, these unconvincing predictions of magnitude are justified because they "do not extend into the far future". This prediction is based on an evaluation of *duration*, and is not a relevant criterion for analyzing magnitude. The Review Board therefore does not accept Imperial's predictions regarding the impacts on the increased access of the program on moose and caribou populations.

For these and other reasons, including the predictions of the effect of increased access made by community members in Samba K'e and Pehdzeh Ki, the Review Board agrees with the DAS that little weight should be accorded to Imperial's impact predictions regarding moose and caribou. The Review Board accepts the DAS (Dec. 9, 2004) submission that this lack of confidence is exacerbated by the limited baseline information available on ungulates in the region and the lack of thresholds available to protect the ecological integrity of these species.

The Board therefore does not accept the developer's impact predictions on moose and caribou. The other evidence regarding caribou and moose available to the Review Board was submitted by communities, including those people currently harvesting and traditional knowledge holders, in writing and during the hearings. The evidence from TK and communities described the importance and sensitivity of many proposed geotechnical investigation sites, and also described the potential for disturbance to wildlife and caribou in these important habitats. This evidence indicates the potential for significant adverse impacts on moose and caribou.

Even though the Review Board does not accept Imperial's predictions, and does accept the evidence from the TK and communities, the Review Board does not find that this development in isolation would cause significant adverse environmental impacts on boreal caribou and moose. This is partly due to the brief and relatively non-intrusive nature of the geotechnical activities, and due to the mitigation of potential impacts promised by Imperial's commitments. The Review Board does, however, find that the proposed geotechnical work has the potential to contribute to a significant cumulative impact on these species, because of the combination of past, present and reasonably foreseeable human activities.

The Review Board notes that boreal caribou are listed as threatened under the *Species at Risk Act* (Schedule 1) and by the Committee on the Status of Endangered Wildlife in

Canada (COSEWIC). As the Review Board has indicated in the past<sup>17</sup>, there is currently little understanding of the habitat needs, population status and dynamics and disturbance tolerances of boreal caribou.

For these reasons, the Review Board is of the opinion that the concerns of communities and the DAS regarding the contribution of this geotechnical program to a significant cumulative on moose and caribou are justified, particularly when considering:

- the vital importance of moose and caribou to the culture, economy and well being of first nations in the Deh Cho;
- the current status of boreal caribou as a species at risk;
- the minimal existing baseline information on boreal caribou in the Deh Cho;
- the potential of this undertaking to cause long-term increased caribou and moose mortality as a result of increased access (including clearing activities along hundreds of kilometers of re-grown secondary access); and,
- the potential for past activities and reasonably foreseeable future developments to contribute to this impact, affecting the same Valued Ecosystem Components in the same region.

The Review Board does not feel that these concerns provide a sufficient basis for rejecting the geotechnical work, but does find that the Imperial Deh Cho Geotechnical Program, in combination with reasonably foreseeable future developments, creates an unacceptable risk of significant adverse impacts on caribou and moose in the area surrounding the route of the geotechnical work. The significant adverse cumulative impact from this program, in combination with other human activities, on caribou and moose in the region can be mitigated. The Review Board accepts the DAS's reasoning that this can be prevented by expanding the geographic scope addressed by the Deh Cho Boreal Caribou Working Group in order to identify, evaluate and manage cumulative impacts on caribou along the proposed Mackenzie Gas Project development corridor.

Although the DAS has recommended to the Review Board that the mandate of the Deh Cho Boreal Caribou Working Group be expanded to include moose, the Review Board is of the opinion that it is premature to do so. There are three main reasons for this: 1) The Deh Cho Boreal Caribou Working Group is intended to focus on caribou, and is likely to be more effective focusing solely on boreal caribou; 2) Even though both caribou and moose are important to Deh Cho communities, moose (unlike boreal caribou) are not currently a species at risk, and therefore do not require the same level of wildlife management as do boreal caribou; and 3) the Review Board has not been presented with evidence confirming that there is as great an immediate need for range management for moose as there is for boreal caribou.

Regarding community concerns of disturbance to wildlife resulting from overflights, the Review Board accepts Imperial's commitment to implement minimum altitude

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<sup>17</sup> MVEIRB, *Report of Environmental Assessment and Reasons for Decision on the Paramount Resources Limited Cameron Hills Extension Project, EA 03-005*, June 1, 2004.



restrictions and avoid large concentrations of wildlife (Aug. 11, 2004, DAR Deficiency Response 8.0). This commitment should be set out in a formal policy for its contractors and staff by Imperial, including altitude restrictions, which should also include the avoidance of any large mammals, instead of just those in “large concentrations” (considering that moose are not typically as social as caribou).

To summarize, the Review Board concludes, based on the submissions at the hearings and the evidence on the public record, that the Imperial Deh Cho Geotechnical Program, in combination with reasonably foreseeable future developments, will cause potentially significant cumulative impacts on boreal caribou and moose unless more is done to mitigate impacts on these important species. Even with Imperial’s commitment to use best practices to mitigate impacts of access, the Review Board concludes that other measures are necessary to prevent these significant impacts.

## **11.4 MEASURES**

### **Measure 7**

In order to prevent significant adverse cumulative impacts on boreal (woodland) caribou from the Imperial Deh Cho Geotechnical Program in combination with reasonably foreseeable future developments, the range area of boreal caribou examined by the Deh Cho Boreal Caribou Working Group (DCBCWG)<sup>18</sup> is to be expanded by RWED to include an area, to be determined by the DCBCWG, centered on the route of the Imperial Deh Cho Geotechnical Program (and proposed Mackenzie Gas Project corridor) from the Sahtu Settlement Area's boundary in the north to the Alberta border in the south. The DCBCWG will develop a Boreal Caribou Management Plan for this same area within 18 months of the acceptance of this *Report of Environmental Assessment* by the federal Minister.

### **Measure 8**

In order to prevent significant adverse cumulative impacts on moose from the Imperial Deh Cho Geotechnical Program in combination with reasonably foreseeable future developments, RWED will review the existing baseline information on moose populations, trends, and habitat usage along the Mackenzie Gas Project development corridor in the Deh Cho region. This review will include consultation with affected Deh Cho communities to identify both existing knowledge and concerns about moose populations. RWED will determine if it has the information it needs to manage cumulative impacts on the moose population from past, present and reasonably foreseeable future developments along the route of the Imperial Deh Cho Geotechnical Program. RWED will, within three years, develop a Moose Management Plan for the Deh Cho region portion of the Mackenzie Gas Project development corridor.

### **Measure 9**

In order to prevent significant adverse environmental impacts, the MVLWB shall, prior to the issuance of any land use permits for the Imperial Deh Cho Geotechnical Program, require Imperial to submit a detailed policy requiring its contractors and personnel to minimize disturbance to wildlife from aircraft overflights related to the Imperial Deh Cho Geotechnical Program. This policy shall be developed in consultation with the affected first nation communities, and details of the final policy shall be released to the affected first nation communities. Imperial shall ensure that any contracts let for air transportation include the terms and conditions of this policy.

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<sup>18</sup> This refers to the Deh Cho Boreal Caribou Working Group as described in the recommendation submitted to the Minister of DIAND by the Review Board in its *Report of Environmental Assessment and reasons for decision on the Paramount Resources Ltd. Cameron Hills Expansion Project, June 1, 2004*.

## 12 Access and Benefit Agreements

Issues of impact equity arise when some parties are adversely affected by impacts of a development while other parties derive the majority of the benefits. This is of particular concern to first nation peoples in the Mackenzie Valley, where developments occur in both areas with settled and unsettled first nation land claims. One way to address impact equity concerns is through agreements linking land access to benefits distribution, where parties negotiate the terms by which developers' access to traditional lands will be acceptable. Agreements of this type can deal with community benefits, obligations of developers and their subcontractors to provide employment and business opportunities, consultation requirements, access to traditional lands, training opportunities and requirements, dispute resolution arrangements, and related issues. For the sake of clarity and consistency, these agreements are referred to herein as "Access and Benefit Agreements" (ABAs).<sup>19</sup>

Discussion highlighting ABAs as a means to promote more equitable distribution of impacts and benefits has figured prominently in the evidence presented during the course of this environmental assessment.

In the *Terms of Reference*, the Review Board included the following item:

*H-1 Economic Impacts: Describe potential direct and indirect economic impacts of the development on communities, including a description of business opportunities and Imperial's contracting process. Provide a summary of overall benefits to the Deh Cho region.*

### 12.1 IMPERIAL'S SUBMISSIONS

In the Wrigley hearing, Jim Hawkins described Imperial's efforts to give priority to Deh Cho region businesses in contracting for the procurement of goods and services for the Imperial Deh Cho Geotechnical Program:

- Imperial advertised the work in Northern papers only;

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<sup>19</sup> The term "Access and Benefits Agreement" is a term of art, not law. These kinds of agreements are found under different names depending on the land claim or statutory framework applicable in the area or the preference of the parties. Such agreements establish relationships between the developer and communities and first nations affected by a development. They are required by law in areas with settled land claims but have been negotiated as part of overall project approvals in other areas of the NWT as well. In the mining context in the North Slave area of the NWT such agreements have been negotiated under the name Impact and Benefit Agreements (IBAs). Agreements related to the effects of development on subsistence and economic harvesting are referred to herein as Harvester Compensation Agreements, and are examined in Section 13 of this *Report of Environmental Assessment*.

- When two or more bids arise from within the Deh Cho region, no external bids were allowed;
- The overall scope of the work was broken down into sixteen smaller packages;
- Imperial held prequalification workshops with Deh Cho businesses to help them put bids together; and
- If bids were close, preference went to those businesses based in the Deh Cho.

Safety, quality and timing of availability were recognized by Imperial as other important factors in contracting for goods and services (Wrigley Hearing Notes, Dec. 1, 2004, pp. 3-4).

While it was clear to all parties that the majority of conditional contracts for the geotechnical program had been given to Deh Cho communities, there was confusion over how many contracts had been awarded, what defined a “Deh Cho business”, and the overall percentage of contract value awarded to Deh Cho businesses. When criticized by the DAS for awarding only about one half of all value of the contracts to DAS communities, Jim Hawkins replied on behalf of Imperial at the Fort Simpson hearing:

*A clarification we would like to make... with respect to the contract, the conditional contract awards for...last year. The fourteen out of sixteen number that’s being quoted, all fourteen of the contracts that were awarded, were awarded to Deh Cho businesses. There were no awards to southern companies. The other two contracts were not awarded at all.*

-Fort Simpson Hearing Transcript, pp. 128-129

When pressed by the DAS on the fact that two companies from Hay River were purported to have been awarded the largest (general service) contracts, Mr. Hawkins replied that “[w]e regard Hay River as being part of the Deh Cho” (Fort Simpson Hearing Transcript, p.131).<sup>20</sup>

In Information Request 2.5, the Review Board asked for the bid evaluation criteria and criteria weighting used in awarding contracts. In response, Imperial stated that “the weightings used in bid evaluation are confidential”. When asked by the DAS in the Fort Simpson hearing why the weighting scheme used to apply the criteria was confidential, Jim Hawkins of Imperial stated “We regard our business dealings as the subject of confidential material. We respect the confidentiality when a company provides us with a bid” (Fort Simpson Hearing Transcript, p. 35).

In its closing statement of Dec. 14, 2004 (p. 2), Imperial stated that “a completed Benefits Agreement is not required by Imperial to provide benefits associated with the Program to

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<sup>20</sup> A great deal of confusions has surrounded these contracts. The evidence on the Public Record indicates that only 14 of 16 available contracts were ever conditionally awarded for the Imperial Deh Cho Geotechnical Program. 12 of the 14 contracts which were conditionally awarded were to go to DAS member community businesses, and the remaining two were to go to businesses from Hay River.

impacted communities. Nonetheless, Imperial remains willing to continue negotiations with the Dehghah Alliance Society and with impacted communities to conclude Benefits Agreements”.

## **12.2 OTHER SUBMISSIONS**

While Imperial focused its efforts on showing how many of the contracts had been conditionally awarded to businesses from the entire Deh Cho region, the other parties expressed concern with the proportion of project funds going to businesses from the five Deh Cho pipeline corridor communities, compared to the proportion of project funds that went to businesses from the Sahtu and Gwich’in Settlement Areas for geotechnical work done by Imperial in those jurisdictions. The DAS stated in the Fort Simpson hearings (Dec. 2, 2004) and its Technical Report (Dec. 9, 2004) that it was concerned that all of the value of the contracts in the Sahtu and Gwich’in Settlement Areas were awarded to companies from within those regions, while only approximately half of the contracting value of the Imperial Deh Cho Geotechnical Program was awarded to DAS member community businesses. The DAS would like the contracting process further altered to provide an advantage to Deh Cho companies, in a similar manner to that of the GNWT’s Business Incentive Policy.

When Imperial’s Jim Hawkins stated in the Fort Simpson hearing that all fourteen contracts actually conditionally awarded had gone to Deh Cho communities, and that Imperial’s definition of Deh Cho communities included the non-pipeline corridor and primarily non-aboriginal community of Hay River, Joe Acorn of the DAS spoke to the issue:

*[T]hat information has never been made clear to us before. Imperial could have provided that information in a very clear manner... and chose not to. And our point doesn’t change, the fact that the two most valuable contracts were awarded to companies not in the local area.*

-Fort Simpson Hearing Transcript, p.131

The DAS stated that “the major issue of disagreement between the DAS and Imperial Oil has been Imperial’s refusal to alter its contracting process to reflect the concerns of the communities and maximize the potential local benefits that are achievable” (DAS Technical Report, Dec. 9 2004, p. 3). The DAS Technical Report went on to state “[i]f this project were to be approved and to proceed in the absence of an ABA with the DAS, there will be significant concern in communities” (ibid, p. 5).

The Liidlii Kue First Nation Chief Keyna Norwegian summarized the ABA issue in the Fort Simpson hearing, stating “...This is our land. This is our backyard that you are crossing and proposing to disrupt, and I think its time we start talking fairly and adequately with each other” (Fort Simpson Hearing Transcript, p. 166).

The frustration of communities at Imperial's apparent lack of willingness to negotiate and conclude ABAs was reinforced in the Wrigley hearing by the Pehdzeh Ki First Nation Chief David Moses:

*For any winter work around PKFN land, any contracting, Imperial should be dealing directly with PKFN. Anything we are capable of handling we will do, anything we can't do, we could see contracted out. We would like to see winter work here, would like the employment arising from winter work. We would like to see the proponent negotiate with impact agreements regarding contracts. I speak for my people to you, these ... issues have been on the table since I started and today are still on the table.*

-Wrigley Hearing Notes, p.19

Similar concerns were voiced by the SKFN, which stated in its written submission of Nov. 30, 2004 that "the issues of compensation and benefits can be negotiated as a package directly with the community" and that "Imperial has remained relatively inflexible on the issue of benefits, particularly contracts..." (p. 3).

The DAS claimed this concern has been aggravated by Imperial's unwillingness to share the weighting of its criteria for bid selection in the Deh Cho. Although Imperial did describe its criteria, it would not state how each criterion was weighted in making contracting decisions. Joe Acorn of the DAS stated

*(W)hat we are looking for is the criteria and weighting Imperial uses. There is no confidentiality being broken in providing it to us... We're not interested in how you apply them for any individual bid. We want to see what the general criteria and weighting are.*

-Fort Simpson Hearing Transcript, p. 36

The DAS recommended that Imperial should be required to negotiate and conclude an overarching Access and Benefit Agreement with the DAS, or individual ABAs with DAS member communities, prior to authorizations.

The difficulty experienced by the developer and first nation parties in developing strong communication ties, is shown by the many outstanding issues related to this environmental assessment. There is a clear link between these communication problems and the ABA issue; the DAS member communities did not want to cooperate fully with the developer on project specifics until ABAs were in place. In the Fort Simpson hearing on Dec. 2, 2004, the DAS described this linkage in the following way:

*[F]rom the very beginning, Wrigley has been very clear that before they would discuss project specifics, they wanted a Memorandum of Understanding [MOU] in place between the Community and the Company on how consultation would occur, on how harvesters would be compensated and on how contracts would be awarded and how benefits would accrue to the community... However, the negotiations with*

*Imperial, on negotiating that MOU, have not gone anywhere from the Community's standpoint because we had not been met with negotiation from Imperial's side of it...*

*There's a definite process in place. They have to come to an agreement with the communities first and then you'll get the specifics. That's what the Community's been saying from the beginning.*

-Joe Acorn, DAS, Fort Simpson Hearing Transcript, pp. 42-43

Chief Keyna Norwegian expressed the ABA-related concerns of the people of the Deh Cho as follows in the Fort Simpson hearing:

*[T]here's issues of uncertain benefits and sharing, alignment and expectations of outcomes, no listening to the Deh Cho specific needs, no effective consultation on economic matters and engaging in existing capacity and legal aspirations.*

*We offer the following recommendations for your consideration; effective economic consultation resulting in impact benefit agreements, engage in local capacity first and work through locals... I don't believe that we, as first nations people, from this land here that you're visiting can be able to sit back and allow a project of this magnitude to happen without full support of the first nations and making sure that we will benefit properly and adequately from this project.*

-Fort Simpson Hearing Transcript, p. 162

Overall, DAS member first nations made it clear that the issues went beyond mere financial compensation. These public concerns go beyond the scope of this individual development and into the future. In the Wrigley hearing, Elder Edward Hardisty explained the issue as one which links fairness, good faith and the future:

*Two worlds are colliding, things will change. [When] you're doing your work, put your feeling and your heart into it, don't just look at your wallet in the back pocket... We are using people's lands here. They are concerned about the land that they cherish so much. The pipeline companies will benefit lots, we want to also. And if this is done this way, and done according to both worlds, we could all win. There are times when we talk about things we are going to do - the good deeds, even though done in good faith, it seems it turns into a lie. I don't like that. We are cautious about that. We have been burned about that a few times. Please take care and take our feelings into consideration so our younger generation could benefit from it.*

-Wrigley Hearing Notes, p. 10

### **12.3 THE REVIEW BOARD'S ANALYSIS AND CONCLUSIONS**

Throughout this environmental assessment, the Review Board has been confronted with issues relating to both impact equity and public concern over land access and Imperial's

development plans. These issues have shaped the relationship between Imperial and those Deh Cho communities identified in the course of this EA as being immediately impacted by the Imperial Deh Cho Geotechnical Program – the communities of Wrigley, Fort Simpson, Jean Marie River, Kakisa and Trout Lake. These communities are all small, primarily aboriginal, and on or near the proposed route of the geotechnical program and the Mackenzie Gas Project. Because of these factors, these “pipeline corridor” communities are especially vulnerable to issues of impact equity, and merit the developer’s special emphasis, in Imperial’s own words, in “provid[ing] benefits associated with the Program to impacted communities”, and “continu[ing] negotiations... to conclude Benefits Agreements” (Developer’s Closing Statement, Dec. 14, 2004, p. 2).

One aspect of the socio-economic impacts that the Review Board must consider is the equity of impact and benefit distribution. Economic benefits of a development can mitigate the social impacts which may be borne by residents in an affected community, if the benefits go to those who are affected by the impacts of the development. As a result, the distribution of impacts and benefits can make a difference to the magnitude of social impacts felt by different segments of an affected population.

Public concern over land access has also been at the forefront of this environmental assessment. Deh Cho first nations view traditional lands as being under their care and see certain types of development as threats to traditional values and as potential contributors to loss of cultural identity. The Review Board notes ABAs are effectively used in other parts of the Mackenzie Valley to mitigate concerns over traditional lands being used for non-traditional purposes. The approval of a development in the absence of an ABA (or ABAs) is seen by Deh Cho first nations as an indication of their lack of control over Deh Cho lands. These concerns are real and firmly held.

The inability of the parties to develop strong communication ties and relationships of trust also speaks to the importance of having a written agreement to define relationships where access to first nations’ traditional land is concerned. Due to DAS member first nations’ perception of Imperial’s lack of willingness to engage in meaningful negotiations towards ABAs, the Deh Cho pipeline corridor communities withheld some information from the developer (i.e., traditional knowledge information related to proposed geotechnical sites). This was part of their strategy to encourage Imperial to actively negotiate agreements.

Communication problems and differing expectations also affected perceptions of the transparency and fairness of the developer’s contracting process. With respect to the transparency of the developer’s process, the Review Board notes that Imperial has shared its criteria for bid selection but not its weighting scheme. It is not, in the Review Board’s view, necessary to treat as confidential the scheme used to determine the relative weighting of the criteria used to select successful contract bids.. The Review Board agrees that the actual scores of any given bid should be treated as a confidential business concern, but suggests that in the interest of transparency and to encourage business



development, the general weighting scheme need not be withheld from the DAS community businesses.

Also symptomatic of the mis-communication between these parties, the DAS was seemingly unaware until the Fort Simpson public hearing that Imperial had only conditionally awarded fourteen of sixteen contracts, and that Imperial's definition of "Deh Cho businesses" differed substantially from that of the DAS. The two largest contracts which were conditionally awarded were proposed for businesses from Hay River, which Imperial defines as a Deh Cho community, although it is not in the pipeline corridor. The Review Board's view is that agreements which define the terms of land access and clearly set out the benefits to be provided to locally affected communities are in the interests of both the developer and the affected first nation groups, in part to bridge these communication problems.

Other Imperial geotechnical programs have occurred in areas with settled land claims. In the Sahtu and Gwich'in Settlement Areas, no access or activity can occur on Sahtu or Gwich'in owned lands before Access Agreements are reached. The Review Board concludes that the absence of a completed land claim in the Deh Cho region does not reduce the importance of similar arrangements. The Review Board views an ABA as one mechanism to ensure that developers and first nation organizations have clear mutual understandings and expectations about socio-economic benefits before work on a development begins. Industrial activities on a first nation's traditional lands that do not have the express support of the affected first nation have the potential to affect the rights and interests of the first nation and its members and can disrupt or prevent traditional and other uses of the land at certain times. ABAs are an important way to mitigate these impacts, to deal with equity issues and ensure that socio-economic benefits reduce adverse social impacts.

The Review Board notes the concerns voiced by the DAS, the PKFN, and the SKFN about the importance of developing a relationship with Imperial based on a clear agreement which sets out the economic benefits which will accrue to affected first nations, in order to reduce social and economic impacts resulting from the Imperial Deh Cho Geotechnical Program. It is, however, clear to the Review Board that these concerns relate not only to the impacts of the Imperial Deh Cho Geotechnical Program, but also to the proposed Mackenzie Gas Project. They are, in effect, concerns about the cumulative social and economic impacts upon the communities that will result from these developments. The DAS communities see the geotechnical program as the leading edge of development in the region.

The Review Board has also heard statements indicating the general willingness of Imperial to negotiate ABAs, but has been provided no evidence during the course of this EA to indicate that Imperial has made recent attempts to vigorously pursue such negotiations.

While Imperial and the DAS pipeline corridor communities have made little progress in finalizing formal access and benefit agreements, Imperial has nonetheless made efforts to give priority to Deh Cho businesses in its contract award process. The evidence shows that the outcomes are generally positive in this regard. The public record indicates that 12 out of the 14 contracts actually conditionally awarded for project related work were to go to businesses from Deh Cho “pipeline corridor” communities. However, the two largest contracts, representing as much as half of the total value conditionally awarded, were to go to businesses from Hay River. While Hay River is a part of the Deh Cho region, the Review Board finds that it is not an “affected community” in the same way as the five DAS member pipeline corridor communities. The fact that the most affected communities were not able to garner more of the financial benefits accruing from the proposed development is evidence of the limitations of the economies of these communities and of a lack of business development capacity that needs to be addressed before larger developments begin in the Deh Cho region.

The Review Board has found public concern exists in Deh Cho pipeline corridor communities related to local business opportunities, land access, community capacity, and relationships with the developer, all related to the Imperial Deh Cho Geotechnical Program and associated with reasonably foreseeable future developments. Pared down to their essence, these concerns are driven by the view that this project will start the communities down the path towards significant social and economic impacts that they are not presently prepared to handle. One clear way to mitigate these impacts, which are cumulative in effect, is to require corridor communities and Imperial to renew their efforts and actively engage in negotiations towards ABAs.

In light of all the evidence, the Review Board finds that a measure is necessary to prevent significant adverse cumulative economic and social impacts arising from unequal distribution of the impacts and benefits of the Imperial Deh Cho Geotechnical Program, alongside reasonably foreseeable future developments. Without progress toward ABAs starting right away, the five affected communities will not have a long enough lead time in which to prepare themselves for the impacts of this project and reasonably foreseeable future developments. It is in the long-term interests of both the affected communities and the developer to address community capacity (social and economic) issues in a proactive, cooperative way immediately. The task is not onerous: both Imperial and the DAS pipeline corridor communities are on the record indicating their willingness to negotiate in good faith towards such agreements.

In addition, the Review Board is of the view that without progress towards ABAs, Imperial’s long term activities may generate increasing levels of public concern that will magnify with future developments.<sup>21</sup> In order to assist in the development of stronger

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<sup>21</sup> In fact, the Review Board conducted hearings in the Deh Cho region in the spring of 2004 on the Mackenzie Gas Project and in its report of May 21, 2004, *Reasons for Decision and Scoping Report for the Environmental Assessment of the Mackenzie Gas Project*, referred that project to Environmental Impact Review because it found significant public concern existed, in part because of socio-economic concerns in Mackenzie Valley communities. The smaller scale of the Imperial Deh Cho Geotechnical Program does not

relationships between Imperial and first nation communities along the proposed MGP corridor, to reduce public concern and to mitigate social impacts related to land access and impact equity, the Review Board is also issuing a series of suggestions, focusing on transparency between the developer and affected communities, preparing Deh Cho pipeline corridor communities for future developments, and suggesting that the Joint Review Panel which is reviewing the Mackenzie Gas Project look closely at these issues in its environmental impact review.

## **12.4 MEASURE AND SUGGESTIONS**

### **Measure 10**

In order to prevent significant adverse cumulative economic and social impacts on communities in the Deh Cho region related to the Imperial Deh Cho Geotechnical Program and reasonably foreseeable future developments along the proposed Mackenzie Gas Project pipeline corridor, the DAS and Imperial must present the MVLWB with evidence of progress towards Access and Benefit Agreements between Imperial and the five DAS member communities affected by the Imperial Deh Cho Geotechnical Program, before Imperial receives any licenses and permits. In the case of a disagreement,, whether such progress has been made is to be determined by INAC.

### **Suggestion 5**

Imperial should, in order to promote business development among first nation communities along the proposed Mackenzie Gas Project corridor, make public the weighting scheme for the criteria used in evaluating contract bids for the Imperial Deh Cho Geotechnical Program.

### **Suggestion 6**

Imperial and both the federal and territorial governments should make efforts to assist first nation communities affected by the Imperial Deh Cho Geotechnical Program and the proposed Mackenzie Gas Project to maximize economic benefits and minimize social and cultural impacts of Imperial's developments in the pipeline corridor region of the Deh Cho.

### **Suggestion 7**

The Joint Review Panel of the Mackenzie Gas Project should consider carefully the issue of whether developer-first nation relationships would be enhanced by agreements defining access rights and benefit distribution and whether such agreements should be required for the Mackenzie Gas Project with all affected first nation communities throughout the Mackenzie Valley.

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eliminate the need for the developer and communities to continue to negotiate in good faith and show progress toward ABAs to reduce existing public concerns.

## 13 Harvester Compensation

Harvester compensation, another socio-economic consideration in the relationship between Imperial and the first nation parties to the EA, was an important issue throughout the course of this EA. Harvester Compensation Agreements define how impacts from a development on traditional harvesting and trapping activities are to be mitigated. In areas with settled land claims, the developer is typically required to compensate first nation individuals for some or all of the following impacts:

- Direct hunting or trapping losses, such as damage to equipment, improvements to a trapping or harvesting area and associated loss of ability to hunt or trap animals for subsistence or economic gain;
- Indirect harvesting losses, such as the reduction in game in an area because of the activities associated with the development; and/or
- Indirect costs associated with first nations people having to travel further afield to engage in successful harvesting activities.

In the *Terms of Reference*, the Review Board included the following item:

*H-5 Traditional Land Use: Discuss the potential impacts of the proposed development on traditional land use and occupation... Describe in detail the concerns raised by land users and the commitments of Imperial regarding compensation for trappers and all other traditional harvesters. Describe detailed mitigations to minimize or avoid those impacts.*

### 13.1 IMPERIAL'S SUBMISSIONS

Regarding harvester compensation, Imperial's DAR stated that the program might disrupt certain traplines and cause a loss of income to the trappers that operate those lines. Imperial proposed to mitigate the potential for these conflicts by locating new access to geotechnical test sites in areas that reduce or avoid conflict with sensitive hunting and fishing areas. In addition, Imperial made a commitment to negotiating towards a compensation agreement (DAR s. 9.4 p. 9-14):

*The issue of compensating trappers will be addressed in the context of the negotiations of a benefits agreement between Imperial and Deh Cho First Nations... Specific terms relating to compensation for the disruption of traplines will be part of the agreement.*

In response to a question from the PKFN about whether Imperial would compensate hunters for reduced catch as a result of the program's disturbance of wildlife from an area, Jim Hawkins of Imperial replied:

*It is our practice to compensate people for actual losses as a consequence of our activities. We rely on them to come forward to make losses known to us directly by contacting Imperial, through Imperial, through band councils, through RRC*

*[Renewable Resource Councils] or through any means [they are] comfortable with. We have not received any claims for that type of compensation you have described. In activities over [the] past two years in three other regions, we have received three claims from trappers, and have settled all three claims to the satisfaction of those trappers... Our first approach is to mitigate to ensure activities provide the least possible disruption... If an individual says our activities have an adverse impact on the harvesting results they are trying to achieve, we can have that individual come forth and make their claim known. We will evaluate on the specifics of that.*

-Wrigley Hearing Notes, p. 16

This was further clarified in the Fort Simpson hearing, during questioning of Imperial by the DAS:

*Joe Acorn (DAS): Yesterday in Wrigley, Imperial was asked a rather direct question by the Lands and Resources Manager, Kelly Pennycook, which was basically if a hunter goes into the field, and does not find any animals to hunt, because of Imperial's projects, will Imperial pay for the cost of the hunt and the loss of the meat.*

*Jim Hawkins (Imperial): The response that we provided to that question in Wrigley is essentially the same as the response I'm about to provide now, and that is that we will consider, from trappers, hunters, harvesters, claims for losses. We will evaluate those claims, as fairly and equitably as we can, and believe that our record shows that we have been able to come to amicable settlements with people who have been impacted by our activities.*

*Joe Acorn: So, if that scenario we described is brought to you, you would not exclude that from your compensation program?*

*Jim Hawkins: That would be an example of a claim that could be brought forward and would be considered, yes.... We don't regard this as a decision by the trapper, or a decision by Imperial, but collaboration to come up with a fair and equitable settlement. So far we've always been able to do that.*

-Fort Simpson Hearing Transcript, pp. 38-39

In its Dec. 14, 2004 closing statement (p. 3), Imperial stated its views on harvester compensation and the need for an agreement as follows:

*A completed Harvester's Compensation Agreement is not required by Imperial to provide compensation for losses by individuals whose harvesting has been impacted by Program activities. Again, Imperial remains willing to continue negotiations with the Dehguh Alliance Society and with impacted communities to conclude a Harvesters' Compensation Agreement.*

## **13.2 OTHER SUBMISSIONS**

The Review Board heard considerable concern in the Wrigley hearing about whether or not Imperial's harvester compensation will go beyond paying for damaged traps and harvesting equipment, to include reduced hunting success. Wilson Dimsdale summarized this issue as follows: "The land is what I feed my family with. How do you compensate for that when you are going to be busy, causing disturbances to wildlife, scaring them off, for winters in the most important hunting area?" (Wrigley Hearing Notes, pp. 12-13). Former Chief Gabe Hardisty stated "Right now, a lot of our young people are trying to go back to the bush, and some of these proposed sites are in trap lines areas too. I know that a lot of things are going to be impacted...." (ibid, p. 9). Kelly Pennycook described a recent event where "six harvesters in the area went looking for moose for their fall hunt, and none got moose because of the helicopter traffic going up and down the corridor" (ibid, p. 16).

Mike Neyelle of the PKFN described the impacts on harvesters as follows:

*I'd like to tell Imperial and the MVEIRB my concern about activities in the Blackwater area. A few years back, we held a big community hunt and within 2 weeks got 21 moose. This past summer and late fall they did geotechnical work with helicopters. This has already impacted moose on river. This past fall, the community harvested 2-3 moose at the most. That type of impact is what we expect from a winter geotechnical program. That's what will happen to the moose.*

*We know for a fact that when the snow gets too deep, moose head on the Mackenzie. Moose will go there if there's work on Blackwater next year. The moose will be moving to a different area where it is quiet. Blackwater is an important moose and caribou calving area!*

*What kind of benefits could we ever get to make up for that? That's going to affect the future generations.*

-Wrigley Hearing Notes, p. 18

Kelly Pennycook, PKFN Land and Resource Officer, further emphasized the financial impacts of reduced hunting success, and how they should be included in harvester compensation agreements:

*The only kind on the record is direct compensation if you run over a trap. The more important compensation is for the lack of ability to hunt in an area, the displacement of wildlife from area and shortened hunting schedules. This is compounded with community members having different jobs, possibly with less time to hunt. Hunting is costly. I've spent \$3000 to get 2 moose.*

-Wrigley Hearing Notes, p. 16

In the Fort Simpson hearing, Chief Keyna Norwegian of the Liidlii Kue First Nation expressed concerns related to impacts on harvesters and the importance of appropriate compensation:

*We've been talking all along that there are people who are on the proposed pipeline right-of-way whose lives will be disrupted by this work and even during the winter work where there is families that are still living alongside the pipeline who... depend on the trapping and hunting of that area. (T)heir life will be disrupted this winter if this work is to proceed. The animals will be scared and so forth and -- and that's a known fact that animals do run when they hear machineries in the bush.*

*So, there are peoples' lives that will be impacted and disrupted for this winter works alone, and for us to proceed at that rate that we've gone is quite unacceptable to us, and we've stated our case over and over and to us it seems that it hasn't been going anywhere.*

*If the Proponents are serious about this project, I think they have to get serious about making sure that we, the people of the Dene, are fully and adequately consulted with and compensated, and we're not only talking about the jobs and getting the contracts, but fully compensated and that our harvesters are taken care of.*

-Fort Simpson Hearing Transcript, pp. 163-164

### **13.3 THE REVIEW BOARD'S ANALYSIS AND CONCLUSIONS**

The Review Board recognizes a need for Imperial to consider compensation claims for reduced harvesting success due to disturbance of wildlife from geotechnical activities in the Deh Cho region. Evidence of this need was demonstrated to the Review Board's satisfaction in the Wrigley hearing.

The Review Board notes that Imperial has expanded its commitment to harvester compensation during the environmental assessment hearings, in response to community comments. Imperial has now committed on the record to considering harvesters' claims for reduced harvest success due to the disturbance of wildlife by the geotechnical work, rather than focusing solely on direct losses such as damaged harvesting equipment and wildlife losses as a result of equipment damage.

Based on the evidence at the hearings and the technical reports on the public record, the Review Board concludes that the Imperial Deh Cho Geotechnical Program will cause potentially significant adverse socio-economic and cultural impacts on harvesters unless more is done to mitigate impacts on harvesting. Even with Imperial's commitments, the Review Board concludes that other measures are necessary to prevent these significant impacts. These measures include notifying communities about specific activities in harvesting areas before conducting work, thereby enabling harvesters to focus their harvesting efforts in different areas for the time that the wildlife disturbance in an area

will be greatest; and compensating community members for additional costs of fuel for having to travel further to ensure hunting success.

### **13.4 MEASURES**

#### **Measure 11**

In order to prevent significant adverse socio-economic and cultural impacts as a result of the Imperial Deh Cho Geotechnical Program disturbing wildlife and reducing harvesting success, Imperial is required to give notice to the communities of Wrigley, Fort Simpson, Jean Marie River, Kakisa and Trout Lake, and post notices showing and describing the location and timing of the work in visible locations in these same communities, two weeks before work begins near these communities.

#### **Measure 12**

In order to prevent significant adverse socio-economic and cultural impacts on harvesters due to increased costs resulting from the need to travel further to hunt because of wildlife disturbances caused by the Imperial Deh Cho Geotechnical Program, Imperial's harvester compensation program must also consider compensation claims for increased fuel costs from harvesters displaced from their traditional harvesting areas.



## 14 Blackwater River Area

Many concerns were expressed in the Wrigley and Fort Simpson hearings and on the written record, regarding proposed geotechnical activities in areas around the mouth of the Blackwater River. The mouth of the Blackwater River is on the east side of the Mackenzie River, north of Wrigley and just south of the Sahtu Land Claim Settlement Area boundary.

In the vicinity of the Blackwater River, Imperial has proposed a 65-person camp, five borrow sites (9.038PB, 9.038PA, 9.091P, 9.044PB, 9.044PA and 10.001P) and a river crossing. Borrow sites 9.038PB, 9.038PA and 9.091P will require a total of 5,500m of new access. The remainder of access is along existing routes.

In its Terms of Reference, the Review Board included the following requirement:

- H-5 Traditional Land Use: Discuss the potential impacts of the proposed development on traditional land use and occupation. Describe in detail the concerns raised by land users... Describe detailed mitigations to minimize or avoid those impacts.*
- H-3 Local Cultural and Heritage Resources: Describe potential impacts on cultural and heritage resources... Describe detailed mitigations to minimize or avoid those impacts.*

On Oct. 26, 2004, the Review Board issued the following as Information Request 2.29:

*On July 19, 2004, former Chief Tim Lennie of Pehdzeh Ki First Nation provided a letter to Imperial that stated the community's opposition to work in the vicinity of the Blackwater River, Ochre River and Willowlake River. Please explain what Imperial Oil has done, or will do, in response to this letter including changing the project design and/or identifying alternative project sites.*

### 14.1 IMPERIAL'S SUBMISSIONS

Imperial's DAR did not discuss the Blackwater area specifically. Although Imperial submitted a Heritage Resource Potential report to the Prince of Wales Northern Heritage Centre (PWNHC - DAR s. 8.2) showing the Blackwater River area to have among the highest potential for heritage sites, there were no impacts predicted for the Blackwater River area in the *Local Cultural and Heritage Resources* section (s9.3) of the DAR. Imperial also failed to mention any impacts relating to the Blackwater River area in *Traditional Land Use*, section 9.4 of the DAR.

Imperial's response to IR 2.29 described Imperial's offers to meet the PKFN and discuss proposed facilities and activities in the Blackwater River area. Imperial stated in the IR

response that it “welcomes the opportunity to meet with the PKFN to further clarify development plans, understand issues and concerns the PKFN may have with these plans and work with the community to identify appropriate ways to address their concerns” (Nov.11, 2004).

In response to comments made in the Wrigley Hearing (Dec. 1, 2004) and the Fort Simpson (Dec. 2, 2004) Hearing, Jim Hawkins of Imperial stated the following on the issue of the Blackwater River area:

*We sat, we listened and we heard all of the comments that were made in Wrigley, particularly with respect to the Blackwater River. We heard representations, passionate statements from the young trappers about how our activities could impact their livelihood. We heard statements from the Elders about the spiritual, cultural importance of the area. We heard from the communities about the importance of that area...(T)hose were important messages for us to hear and we heard them clearly and we heard them in sufficient detail for us to understand.*

*The area there is very rich and it's very important. We also have not that many choices about where we could route a pipeline. That particular corridor is narrow and that presents a challenge for us to put in place plans that respect and understand the issues that are facing the community.*

*So, yes, we did hear and yes, we will consider and we do recognize that it's a very difficult issue for all of us to go forward on.*

-Fort Simpson Hearing Transcript, pp. 93-94

In terms of actual relocations and alternative sites, Imperial stated, upon questioning, that it has not conducted field investigations to identify any suitable alternative borrow sites to those in the Blackwater area (Fort Simpson Hearing Transcript, p. 77). Imperial did, however, offer to relocate the proposed geotechnical camp at Blackwater River to the Wrigley area.

In its closing statements of Dec. 14, 2004, Imperial stated that “the detailed information provided at the public hearings has helped Imperial understand the particular cultural and environmental sensitivities of the... Blackwater River watershed”. Imperial indicated in this same statement that it believes that all borrow sites in and around the Blackwater area can be investigated without significant environmental impact. No supporting evidence was offered. In the same closing statement, Imperial stated that it “believes that the geotechnical samples from the Blackwater River riverbed can be obtained without significant environmental impact” and that it “believes that the proposed access to this site offers the safest and most environmentally responsible option”.

## **14.2 OTHER SUBMISSIONS**

Most of what the Review Board heard about the Blackwater River Area was presented in the PKFN's written submission of Nov. 27, 2004, and at the Wrigley hearing on Dec. 1, 2004. The Review Board heard from Elders, youth, leadership and community members in general about the importance the Blackwater River area held to them.

The PKFN's written submission of Nov. 27, 2004 stated the following (p. 1):

*First of all we are greatly concerned with the proponent's negligence to address the Blackwater project area work adequately. We have requested (and) at various times told... and consulted with them many times about the **great significance of this area, being spiritually, culturally and ecologically beyond measure to our people.** This area is a treasure trove of biodiversity... We have appealed many times that there is at least a 15 kilometer buffer zone on both the north and south sides of the Blackwater River. Yet **the proponent still seeks to explore in this area for development and this is not acceptable by the Pehdzeh Ki First Nation's people.** - (emphasis added by the Review Board)*

The PKFN written submission goes on to describe each site in detail, stating that:

- Former Chief Tim Lennie has repeatedly requested the Blackwater River area be a "hands-off zone";
- The Blackwater River area has many spiritual sites including a sacred rock and the site of People- Turned-to-Stone;
- The Blackwater River area is a harvesting area for local residents with bears, moose pastures and a caribou migration zone; and
- The Blackwater River area is part of a managed candidate protected area (called Pehdzeh Ki Deh).

The PKFN analysis of proposed borrow sites around the Blackwater River area also described the area as an important cultural gathering place for the community, and identifies the existence of important denning sites. The PKFN go on to state "We are also troubled to the highest degree about the impact on our lands in this area... as we believe that these many impacts could push this area to beyond ecological thresholds / point of no return" (PKFN Written Submission, p. 8).

At the Wrigley Hearing, Kelly Pennycook spoke of the "great significance of the Blackwater area", describing it as a "spiritual site with traditional uses", and restating that the geotechnical investigation in the Blackwater River area is not acceptable to the people of the PKFN. Elder Felix Tale gave the Review Board his accounts of the spiritual significance of the Blackwater River area, describing it as a site that is widely held by many other communities to be sacred as well. Elder Tale stated that the Blackwater River is not an area to play around with; and requested that the developer not go there.

He went on to describe the Blackwater River area as having many burial sites that are now overgrown and hard to recognize.<sup>22</sup>

In the PKFN written submission, the community has requested no development within 15 km of the area, and no drilling in the river. Recognizing that the proposed pipeline will need to cross the Blackwater River somewhere, the community accepts the geotechnical program investigating the river crossing only if there is no new access created.

PKFN Band Manager Wilson Dimsdale also noted the high concentration of proposed geotechnical sites in the Blackwater River area, and recommended that the Review Board consider the combined synergistic impacts of all proposed sites in the area, rather than considering each in isolation. He went on to point out that topography in the Blackwater River area requires the locating of drill sites and other components in such a way that their impacts will overlap and be additive (Wrigley Hearing Notes, pp. 18-19).

In the Fort Simpson hearing, the DAS gave its strong support to the PKFN's concerns about the Blackwater area, reinforcing the unequivocal refusal to allow developments in the area:

*Some activities that are being proposed for this project, are directly leading into the Mackenzie Gas Project... What's being proposed here is a result of what is being proposed for the Mackenzie Gas Project. They want to put a compressor station or a camp in a specific location, we all know they've got to do the geo-technical data to find out if it's a suitable location.*

*Imperial has been informed for quite a long while that Blackwater is important. Now, if this Board sees fit to give Imperial approval to do geotech work in the Blackwater area, it will disappoint the communities, but what you are essentially giving them approval to do was waste their own money, because quite frankly, there will never, ever be a compressor station built in the Blackwater River area. There will never, ever be a nine hundred person camp built in the K'eotsee Lake Watershed. The communities will not let this happen.*

-Joe Acorn, DAS, Fort Simpson Hearing Transcript, p. 113-114

The DAS goes on to state that Imperial's approach to the Blackwater issue is seen by communities as an indicator of its insincerity in respecting community wishes:

*Imperial persisting with this application, long after these concerns have been raised with them, and these positions made clear, what frankly goes against Imperial's statements that they respect and listen to the views of the communities.*

*I noted... when Mr. Hawkins was being questioned... Mr. Hawkins replied that if the geo-technical data comes back and tells the proponent that a project facility has to be moved... they will do it. And in essence, what the communities are asking for is for*

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<sup>22</sup> All this discussion comes from the Wrigley Hearing Notes.

*Imperial to give the same respect to the communities that they're giving to the geotechnical data. If the data says don't do it here, they're not going to do it. The communities are saying, don't do it here, they shouldn't do it...*

*When the communities make their views known, they should not have to engage in months of debate and argument with Imperial, over why they don't want to be in this area. We should not have to justify why this area is important to Imperial Oil, nor should we have to provide all of our data and all of our reasoning for that. When Imperial was informed... of these areas quite some time ago, Imperial should not have persisted in pursuing these Applications any further and they should have set to work identifying alternative locations at that time.*

-Joe Acorn, DAS, Fort Simpson Hearing Transcript, pp. 115-116

The DAS went on to state that the communities are not opposing most of the sites but they are drawing a line at the sites most important to them, and that the DAS expects that these areas will be dealt with seriously by Imperial (Fort Simpson Hearing Transcript, p. 126).

In response to questions from Jim Hawkins of Imperial, Kelly Pennycook of the PKFN described how the community decided that 15km was an appropriate area to recommend as a development-free zone:

*There were a number of factors. We didn't even want it that close. We wanted it to be 15 miles. But we looked carefully at a variety of factors. We looked at the topography, compressors, traffic, waste, cultural, spiritual and ecological integrity of the area, and our best overall judgment was that 15km was a good bare minimum... It is 15km away from any place along the corridor that the Blackwater River follows.*

-Wrigley Hearing Notes, p. 17

### **14.3 REVIEW BOARD'S ANALYSIS AND CONCLUSIONS**

The Review Board has heard repeatedly and consistently that the Blackwater site is of extreme importance to the people of the PKFN, "spiritually, culturally and ecologically beyond measure" (PKFN Written Submission, Nov. 27, 2004, p. 1). The Review Board recognizes the obvious effort the PKFN has put into its site-by-site analysis of the proposed works in the Blackwater River area. The Review Board has heard concerns from all parts of the PKFN society, from youth, Elders, leaders, and other members of the PKFN, as well as from the DAS. The fact that the Blackwater River area is of concern to a wide cross section of the PKFN society has also been recognized by Imperial. The Review Board accepts that Blackwater River is an area of the utmost value to the PKFN.

The Review Board notes that the PKFN has stated its frustration with Imperial's lack of concrete responses to its long-stated concerns about the Blackwater River area. Imperial

only stated that the detailed information at the hearings has helped it understand the nature of the concerns about the Blackwater River area. Carl Warner of Imperial further stated during the Wrigley hearing that the sensory disturbance of its activities on wildlife would be limited to a maximum of 500m from drill sites (Wrigley Hearing Notes).

The Review Board notes that Imperial did not mention concerns about the Blackwater River area when asked in the DAR (produced in June 2004) to describe impacts on traditional land use, local cultural and heritage resources. This, despite having previously referenced the PKFN's (April 11, 2004) correspondence with Imperial regarding concerns about the Blackwater River area. Imperial's own 2002-2003 study of heritage sites in the Deh Cho gave the Blackwater River area its highest rating for potential heritage sites. The Review Board also notes that as of the date of the final EA hearings, Imperial has conducted no field work to identify alternate sites as repeatedly requested by the PKFN. The Review Board thus acknowledges that the PKFN has due reason for being "greatly concerned with the proponent's negligence to address the Blackwater project area work adequately" (PKFN letter, Nov. 27, 2004, p. 2). Based on these facts, the Review Board concludes that Imperial has not made sufficient effort early enough in the process to understand and respond to the PKFN's concerns regarding the Blackwater River area.

The Review Board is aware of Imperial's commitment to move the proposed 65-person camp from the Blackwater area to a site closer to Wrigley. The Review Board accepts that this is a useful commitment. However, this commitment alone is not sufficient to mitigate the combined adverse impact of proposed geotechnical works in the Blackwater area. Even with this commitment to move the camp, the evidence offered by Imperial (that the remaining developments in the Blackwater River area will not cause significant adverse environmental impacts) is greatly outweighed by the evidence from the PKFN and the DAS that it will cause significant adverse impacts.

Although the Review Board has heard concerns expressed about geotechnical work at other sites near Wrigley (including Ochre River, Smith Creek, River Between Two Mountains and Willowlake River)<sup>23</sup>, the area about which the strongest concerns were expressed, in the opinion of the Review Board, was the Blackwater River area. The Review Board also notes that the inclusion by the PKFN of the Blackwater River area in the Pehdzeh Ki Deh Candidate Protected Area demonstrates that the people of the PKFN have been concerned about protecting this area long before Imperial applied for its Deh Cho Geotechnical Program.

It is the Review Board's conclusion that all of Imperial's proposed work sites in the vicinity of the Blackwater River will cause significant adverse cultural, and social

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<sup>23</sup> See Section 15 of this report for submissions and deliberations about these other areas.

**Map 4: EA03-009 Imperial Geotech EA -**  
 Blackwater River Area: Approximate Locations of Proposed Work Sites and 3km Buffer Zone



This is not a legal document. For illustration purposes only. Sites not to scale. For more information contact the Mackenzie Valley Environmental Impact Review Board at (867) 766-7050. For site specific details, see Type A Land Use Permit Application MV2003X0045 with the Mackenzie Valley Land & Water Board.

Created February 7, 2005

- N Legend**
- existing pipelines
  - Winter Road
  - rivers
  - lakes
  - borrow investigation sites
  - site access roads
  - 3km Buffer Zone
  - River Crossing Boundaries

**Note:** The existing (Enbridge) pipeline right-of-way indicated here approximately coincides with the location of the proposed Mackenzie Gas Pipeline and the proposed locations of the Imperial Deh Cho Geotechnical Program



impacts on the people of the PKFN. In order to mitigate these cultural and social impacts, the Review Board is recommending a measure requiring that no parts of the Imperial Deh Cho Geotechnical Program may occur within 3 km of either bank of the Blackwater River, in an area running 15 km upstream (east) from where the Blackwater River meets the Highway 1 winter road (see Map 4 for more detail). No other mitigation will sufficiently reduce or avoid significant adverse impacts in this area. The sole exception to this no-development zone is the pipeline river crossing site, which should only be investigated without new access.

Although the Review Board has considered the 15 km zone requested by the PKFN, the Review Board finds the significant impacts are related to disturbance of heritage and spiritual sites in closer proximity to the Blackwater River. The Review Board is of the opinion that a zone extending 3 km from each bank of the Blackwater River will adequately mitigate the majority of these concerns. Although some of the environmental concerns around the Blackwater River described by the PKFN extend over a greater area, the Review Board finds that these relate primarily to the MGP, and should be addressed at an appropriate time during the environmental impact review of the MGP.

#### **14.4 MEASURE AND SUGGESTIONS**

##### **Measure 13**

In order to prevent significant adverse social and cultural impacts on the people of the Pehdzeh Ki First Nation, no land use activities for geotechnical sites within 3 km of either bank of the Blackwater River and within 15 linear kilometers upstream (east) of where the Blackwater River meets the Highway 1 winter road are to be authorized by the MVLWB. The sole exception to this is the proposed Blackwater River pipeline crossing site, which may only be investigated without new access.

##### **Suggestion 8**

The Joint Review Panel of the Mackenzie Gas Project should review and carefully consider the social, cultural and ecological importance of the Blackwater River area when assessing the Mackenzie Gas Project.

##### **Suggestion 9**

Imperial should post notices of activity in visible locations in Tulita two weeks prior to work in areas of the program to the north of the Blackwater River, and distribute the same notice to the Tulita Renewable Resource Council. This will enable harvesters from Tulita to focus their efforts in other locations while temporary disturbances from the geotechnical program are affecting wildlife in a given location.



## 15 Other Sensitive Sites Near Wrigley

In addition to hearing concerns about Blackwater River, there are several other sites near Wrigley about which concern was expressed by the PKFN and the DAS. See Map 5 for the location of these sensitive sites.

Relevant Terms of Reference items and information requests from the Review Board are the same as described above in section 14 (Blackwater River Area).

### 15.1 IMPERIAL'S SUBMISSIONS

Imperial's DAR made no impact predictions for any particular sites near Wrigley. Imperial's response to IR 2.29 mentioned no specific sites other than Blackwater River. It did contain the general statement that "Imperial welcomes the opportunity to meet with the PKFN to further clarify our developments, understand issues and concerns the PKFN may have with these plans and work with the community to identify appropriate ways to address their concerns" (IR 2.29 Response, Nov.11, 2004).

Regarding Willowlake River, in its closing statement of Dec. 14, 2004, Imperial stated that it believes that the Willowlake River borrow site (listed in the closing statement as 20.025P but later verified to mean site 20.015P) can be investigated without disturbing heritage resources or interfering with the traditional use of the area, and that geotechnical samples from the Willowlake River riverbed could be obtained without significant environmental impact. Imperial agreed with the recommendation by the PKFN to move the Willowlake River camp to the old bridge construction site with no new clearing. Imperial also committed "to accommodate families living at Betsedea [sic] during the Program activities".

Other points raised by Imperial in its closing statement regarding sites near Wrigley are as follows:

- Imperial agreed to delete the Smith Creek crossing site.
- Imperial believes that geotechnical samples from the River Between Two Mountains riverbed can be obtained without significant environmental impact.
- Imperial believes that all of the borrow sites around the Ochre River area (sites 10.013P, 10.014AP and 10.020P) and all of the borrow sites around Wrigley (sites 10.120P, 10.037P and 10.038PA) can be investigated without significant environmental impact.

Imperial acknowledged that new information about community concerns related to specific sites arose in the hearings and said it will continue to work with communities to address community concerns.

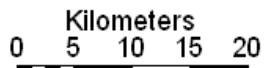
**Map 5: EA03-009 Imperial Geotech EA- Sensitive Sites Around Wrigley**



**Mackenzie Valley**  
Environmental Impact Review Board

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Created February 8, 2005

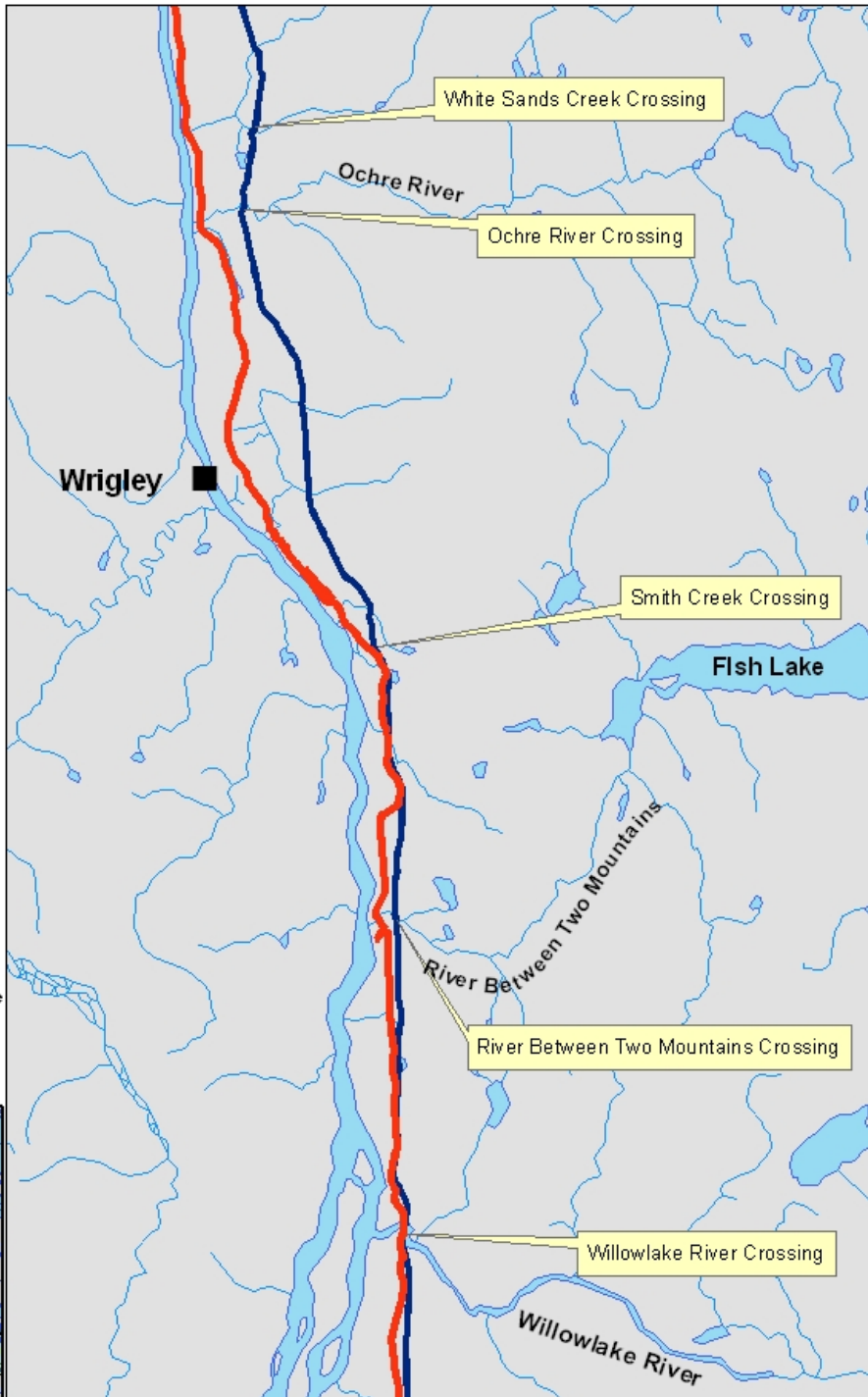


**Legend**

- communities
- road\_NWT
- existing pipelines
- rivers
- lakes



**Note: The existing (Enbridge) pipeline right-of-way indicated here approximately coincides with the location of the proposed Mackenzie Gas Project and the proposed locations of the Imperial Deh Cho Geotechnical Program.**



## **15.2 OTHER SUBMISSIONS**

The PKFN described other sites it considers sensitive in its written submission of Nov. 27, 2004:

1. At the mouth of the Ochre River, near proposed geotechnical borrow site 10.020P, the PKFN identified a primary community harvest area with abundant moose, caribou, bear and marten. It is used for hunting, berry harvesting, and trapping. Bear denning sites occur in the area. It is part of a Candidate Protected Area within the NWT Protected Area Strategy.
2. At Smith Creek, near geotechnical borrow sites 10.043P and 10.044PB, the PKFN identified traditional land uses, hot springs and waterfalls, heritage resources, wildlife habitat and denning sites, and hunting and fishing areas. The river crossing at this site is unacceptable to the PKFN because of its cultural importance. The frost heave investigation site at this location is also unacceptable because of its proximity to Wrigley, but would be acceptable if moved towards the existing Enbridge pipeline.
3. At River Between Two Mountains, Imperial has proposed a river crossing and borrow site 10.071P. This area is used for hunting and fishing, is a cultural gathering area, and has important underground streams. The Review Board heard concerns about a family that live largely off the land in this area. The Yendie family was identified in the Fort Simpson hearing by former Grand Chief Gerry Antoine (Fort Simpson hearing Transcript p. 141), as living in the area of River Between Two Mountains. The Yendie family has a traditional subsistence harvesting lifestyle, and is particularly vulnerable to disturbances from the geotechnical program. The PKFN stated that they would accept a crossing investigation site here provided that there is no new access and no drilling in the riverbed.
4. The mouth of the Willowlake River has a river crossing, a borrow investigation site (20.015P), and a camp proposed as part of the geotechnical work. This is one of the PKFN's primary hunting and fishing sites with good moose habitat. It contains many heritage sites, and is part of the Edehzie Candidate Protected Area. The Betsedea and Boots families live a traditional subsistence harvesting lifestyle here, and are particularly vulnerable to disturbances from the program. The DAS, with reference to the Betsedea family, stated that it is "of particular importance (that) the privacy of the residents must be respected and impacts upon them minimized" (Dec. 9, 2004, Technical Report, p. 14). The camp site is acceptable to the PKFN only if it is located at the old bridge construction site with no new clearing activity. The PKFN would like to see no new access and no drilling in the riverbed here. The proposed borrow site is unacceptable to the PKFN. If the

area is used, the PKFN argue that special care should be taken to ensure that the Willowlake River settlement's access road is not damaged.

5. Four borrow sites are proposed near Wrigley. This area is important for caribou, marten, and rabbit, and serves as an important wildlife corridor. A trap line runs along one of the sites proposed for development. This site is considered too close to the community of Wrigley, but would be acceptable to the PKFN if it was moved one kilometer east.

In addition to the PKFN submission on these sites, the DAS, in its technical report of Dec. 9, 2004, also recommended deleting borrow site 20.015P at Willowlake River, and supported the PKFN's recommendations from the hearing in Wrigley. The DAS also echoed the PKFN's concerns for the residents of the small settlement at Willowlake River. In the same report (p. 8), the DAS stated that

*"It is obvious that Imperial Oil has not taken the community as seriously as it should have and has continued to push ahead to obtain authorizations for work in areas that the communities do not want them working in. Imperial has not been doing the work necessary to identify alternative project locations".*

The DAS identified the major problem sites as being the K'eotsee Lake watershed, and the Blackwater, Ochre and Willowlake Rivers.

### **15.3 REVIEW BOARD'S ANALYSIS AND CONCLUSIONS**

The Review Board notes that the PKFN has gone to great efforts to analyze each proposed geotechnical site in cultural and ecological terms. This demonstrates the importance to the community of the areas highlighted in the PKFN report of Nov. 27, 2004.

The Review Board also notes that Imperial has provided no site-specific evidence to support its claims that its proposed activities at these sites will result in no significant environmental impacts. Imperial produced no evidence, maps or charts showing how impacts from their activities at each site will be mitigated nor did they address the impacts on the specific areas of concern expressed by the PKFN. Imperial also did not indicate what the cumulative effects would be of opening new roads between sites, or re-opening overgrown historical access routes.

In the Review Board's proceedings, the onus is on each party, including the developer, to prove its case. With respect to sensitive sites near Wrigley the PKFN and, to a lesser degree, the DAS have done so. Imperial has not. Imperial did state that the hearings were the first time much of this detailed information had been heard by them. It appears that Imperial's efforts have been limited to an offer to discuss issues with the PKFN. In

the Review Board's view, it would clearly be in both the PKFN's and Imperial's interest to continue the exchange which was begun through this EA.

It has also been made clear to the Review Board by the PKFN and the DAS that first nations were not forthcoming with specific details regarding particular sites because they were not satisfied with Imperial's approach to ABA negotiations. As it was stated in the Fort Simpson hearing by Joe Acorn of the DAS, "There's a definite process in place. They have to come to an agreement with the communities first and then you'll get the specifics. That's what the community's been saying from the beginning" (Fort Simpson Hearing Transcript, pp. 42-43). Although the PKFN chose to take this approach which was not conducive to good consultation, the Review Board notes that Imperial had opportunity to search for alternatives to the areas that Wrigley was concerned about, even without having details of the specific nature of the PKFN concerns for each site. .

Regarding the Yendie, Betsedea and Boots families, the Review Board accepts the evidence it has heard that families living primarily subsistence lifestyles on the land are more vulnerable to adverse impacts caused by the disturbance of the geotechnical activity. No contrary evidence was provided by Imperial. The Review Board concludes that it is necessary to mitigate the impact of the geotechnical work on these families' subsistence lifestyle.

The Review Board concludes, based on the written record and the evidence presented at the hearings, that Imperial's Deh Cho Geotechnical Program is likely to cause significant adverse environmental impacts at Ochre River, Willowlake River, River Between Two Mountains, Smith Creek, and the area immediately surrounding Wrigley. However, this significant impact can be prevented with the imposition of measures. In this case, the measures include requiring Imperial to conduct site visits with community Elders and resident families prior to work being undertaken in order to identify heritage resources, and consulting directly with the Betsedea, Boots and Yendie families when conducting activities near their homes and main harvesting areas.

In deciding appropriate measures to mitigate the impact, the Review Board notes that although all of these sites are clearly important to the people of Wrigley, and concern was expressed about all of these sites, the level of concern was not, in the Review Board's opinion, as great as that expressed concerning the Blackwater River. It would be inappropriate, in the Review Board's view, to impose the same type of measure at each of these sites as is required at the Blackwater River.

## **15.4 MEASURE AND SUGGESTION**

### **Measure 14**

Prior to conducting geotechnical investigations at each of the proposed sites surrounding Ochre River, Willowlake River, River Between Two Mountains, Smith Creek and Wrigley, representatives of Imperial and Colt KBR are to conduct a site visit with representatives of the PKFN Pipeline Working Group and community Elders (along with translators as needed), to identify specific locations of heritage resources within these areas. Imperial must avoid disturbing these heritage resources with its geotechnical activities. For the areas of Willowlake River and River Between Two Mountains, the resident Betsedea, Boots and Yendie families must be invited to participate in the site visit to identify specific locations which must not be disturbed, to suggest timing of activities that would cause the least disruption to harvesting and other traditional activities, and to be alerted of the exact timing of Imperial Deh Cho Geotechnical Program activities in their traditional areas.

### **Suggestion 10**

Imperial should ensure that the Willowlake River settlement's access road is not damaged by its activities during the Imperial Deh Cho Geotechnical Program.

## **16 Implementing Commitments and Measures**

Throughout this environmental assessment, the Review Board has carefully considered the commitments made by Imperial when deciding on questions of impact significance and the need for, and nature of, the mitigation measures necessary to address these potential impacts. The Review Board's conclusions about significance are based on all the evidence on the public record and these considerations include Imperial's verbal and written commitments throughout the course of this EA. These commitments are an essential component of the foundation for the Review Board's significance determination. As a consequence, in order to prevent significant adverse environmental impacts, these commitments must be implemented.

Some of the Review Board's recommendations are also directed at regulatory agencies. The active involvement of regulators is at times necessary to manage both the environment and human activity in order to avoid development impacts or reduce them below the level of significance. In the case of this proposed development, all of the measures directed at regulatory authorities are, in the Review Board's opinion, necessary to prevent significant adverse environmental impacts from the proposed Imperial Deh Cho Geotechnical Program.

### **Measure 15**

In order to prevent significant adverse environmental impact on the people and land of the Deh Cho region from the Imperial Deh Cho Geotechnical Program, regulatory authorities shall include in their authorizations those items set out in the Developer's Commitments, listed in Appendix C1 of the *Report of Environmental Assessment*, that are within their jurisdiction.

### **Suggestion 11**

Imperial should, at the end of the Deh Cho Geotechnical Program, prepare a report outlining the implementation status of each of its commitments so that regulatory authorities and parties to this EA can evaluate the effectiveness of these commitments from an impact mitigation standpoint.

## 17 Conclusions

The Review Board would like to express its appreciation to Imperial and the DAS member community first nations for their diligent efforts throughout the course of this EA. Without such efforts, the conduct of effective environmental impact assessment is not possible.

There are lessons to be learned from every EA, and with the MGP in sight, the Review Board urges Imperial and affected communities focus on fostering productive communication strategies. Earlier and better communication, consultations and negotiations between the proponent and communities would have enabled Imperial to identify community concerns earlier and better design their geotechnical program to avoid problems. Imperial and the first nations in the affected communities would benefit from a more collaborative approach in the future.

The Review Board found that the Imperial Deh Cho Geotechnical Program, as proposed, is likely to cause significant adverse environmental impacts. These include, but are not limited to, social and cultural impacts from activities in locations that are of the utmost importance to communities. The Review Board has recommended a number of measures to reduce or avoid significant adverse environmental impacts associated with the Imperial Deh Cho Geotechnical Program, and also has relied in the development of these measures and in its overall recommendation on this development on the developer's commitments (as listed in Appendix C1).



# Appendix A: Summary of Measures and Suggestions

## Measures

### **Measure 1**

In order to prevent significant adverse environmental impacts from the geotechnical work on the K'eotsee Lake watershed and to prevent significant social and cultural impacts on the people of Trout Lake, community environmental monitors and an Elder, all from Trout Lake (along with translators as needed), must be present for all site investigations in the K'eotsee Lake watershed, to provide guidance in the avoidance of heritage sites and to provide the community with reassurance that Imperial is exercising due diligence regarding environmental precautions in its Deh Cho Geotechnical Program.

### **Measure 2**

In order to prevent significant adverse environmental impacts from geotechnical work on K'eotsee Lake and watershed, Imperial must locate any alternate geotechnical sampling sites as far to the northeast as possible, within the boundaries of the Mackenzie Gas Project development corridor, in order to maximize the distance between geotechnical sites and K'eotsee Lake.

### **Measure 3**

In order to mitigate the significance of the cumulative impacts of the geotechnical work in combination with reasonably foreseeable future developments, the NWT Protected Area Strategy Secretariat (PAS) and the Sambaa K'e First Nation (SKFN) shall within the next 12 months enter into discussions regarding the SKFN's interest in seeking protected area status for the K'eotsee Lake watershed.

### **Measure 4**

In order to prevent a significant adverse social impact on the community of Trout Lake due to traffic safety risks arising from the Imperial Deh Cho Geotechnical Program, Imperial must meet with the SKFN and discuss the specific techniques Imperial will use to inform and warn community road users of industrial traffic. Based on this meeting, Imperial shall implement appropriate methods which will, at a minimum, include small advance vehicles with signage and flags and warning the community road users of the time periods of major industrial road usage. This meeting shall occur prior to work beginning in areas where the Trout Lake winter road is utilized by Imperial employees and/or contractors.

### **Measure 5**

In order to prevent significant adverse social impact on road users in the Deh Cho region resulting from increased risks when sharing roads with industrial traffic, the MVLWB shall, prior to the issuance of any land use permits for the Imperial Deh Cho Geotechnical Program, require Imperial to submit a detailed policy requiring that heavy vehicles supporting the Imperial Deh Cho Geotechnical Program yield to public traffic, where safe to do so, on Highway 1 and the Highway 1 winter-road. Imperial shall ensure that the terms and conditions in any contracts let for the Imperial Deh Cho Geotechnical Program make compliance with this policy mandatory.

### **Measure 6**

The MVLWB must not issue permits or licenses for the Imperial Deh Cho Geotechnical Program until receiving a letter from Imperial making a commitment to fund the Pehdzeh Ki First Nation and the Sambaa K'e First Nation to hire their own Community Environmental Monitors. The letter must also include the following additional commitments:

1. This program will be similar to that conducted by Imperial in the Gwich'in Settlement Area, and set out similar roles, training and involvement for the Community Environmental Monitors; and
2. This program will include funding for a minimum of ten days of field observation by the Community Environmental Monitors, to determine existing biophysical conditions, in advance of the geotechnical program.
3. Any reports of findings from advanced field observations by Community Environmental Monitors will be considered by Imperial in the planning and management of the subsequent geotechnical work.

### **Measure 7**

In order to prevent significant adverse cumulative impacts on boreal (woodland) caribou from the Imperial Deh Cho Geotechnical Program in combination with reasonably foreseeable future developments, the range area of boreal caribou examined by the Deh Cho Boreal Caribou Working Group (DCBCWG)<sup>24</sup> is to be expanded by RWED to include an area, to be determined by the DCBCWG, centered on the route of the Imperial Deh Cho Geotechnical Program (and proposed Mackenzie Gas Project corridor) from the Sahtu Settlement Area's boundary in the north to the Alberta border in the south. The DCBCWG will develop a Boreal Caribou Management Plan for this same area within 18 months of the acceptance of this *Report of Environmental Assessment* by the federal Minister.

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<sup>24</sup> This refers to the Deh Cho Boreal Caribou Working Group as described in the recommendation submitted to the Minister of DIAND by the Review Board in its *Report of Environmental Assessment and reasons for decision on the Paramount Resources Ltd. Cameron Hills Expansion Project, June 1, 2004*.

**Measure 8**

In order to prevent significant adverse cumulative impacts on moose from the Imperial Deh Cho Geotechnical Program in combination with reasonably foreseeable future developments, RWED will review the existing baseline information on moose populations, trends, and habitat usage along the Mackenzie Gas Project development corridor in the Deh Cho region. This review will include consultation with affected Deh Cho communities to identify both existing knowledge and concerns about moose populations. RWED will determine if it has the information it needs to manage cumulative impacts on the moose population from past, present and reasonably foreseeable future developments along the route of the Imperial Deh Cho Geotechnical Program. RWED will, within three years, develop a Moose Management Plan for the Deh Cho region portion of the Mackenzie Gas Project development corridor.

**Measure 9**

In order to prevent significant adverse environmental impacts, the MVLWB shall, prior to the issuance of any land use permits for the Imperial Deh Cho Geotechnical Program, require Imperial to submit a detailed policy requiring its contractors and personnel to minimize disturbance to wildlife from aircraft overflights related to the Imperial Deh Cho Geotechnical Program. This policy shall be developed in consultation with the affected first nation communities, and details of the final policy shall be released to the affected first nation communities. Imperial shall ensure that any contracts let for air transportation include the terms and conditions of this policy.

**Measure 10**

In order to prevent significant adverse cumulative economic and social impacts on communities in the Deh Cho region related to the Imperial Deh Cho Geotechnical Program and reasonably foreseeable future developments along the proposed Mackenzie Gas Project pipeline corridor, the DAS and Imperial must present the MVLWB with evidence of progress towards Access and Benefit Agreements between Imperial and the five DAS member communities affected by the Imperial Deh Cho Geotechnical Program, before Imperial receives any licenses and permits. In the case of a disagreement,, whether such progress has been made is to be determined by INAC.

**Measure 11**

In order to prevent significant adverse socio-economic and cultural impacts as a result of the Imperial Deh Cho Geotechnical Program disturbing wildlife and reducing harvesting success, Imperial is required to give notice to the communities of Wrigley, Fort Simpson, Jean Marie River, Kakisa and Trout Lake, and post notices showing and describing the location and timing of the work in visible locations in these same communities, two weeks before work begins near these communities.

**Measure 12**

In order to prevent significant adverse socio-economic and cultural impacts on harvesters due to increased costs resulting from the need to travel further to hunt because of wildlife disturbances caused by the Imperial Deh Cho Geotechnical Program, Imperial's harvester compensation program must also consider compensation claims for increased fuel costs from harvesters displaced from their traditional harvesting areas.

**Measure 13**

In order to prevent significant adverse social and cultural impacts on the people of the Pehdzeh Ki First Nation, no land use activities for geotechnical sites within 3 km of either bank of the Blackwater River and within 15 linear kilometers upstream (east) of where the Blackwater River meets the Highway 1 winter road are to be authorized by the MVLWB. The sole exception to this is the proposed Blackwater River pipeline crossing site, which may only be investigated without new access.

**Measure 14**

Prior to conducting geotechnical investigations at each of the proposed sites surrounding Ochre River, Willowlake River, River Between Two Mountains, Smith Creek and Wrigley, representatives of Imperial and Colt KBR are to conduct a site visit with representatives of the PKFN Pipeline Working Group and community Elders (along with translators as needed), to identify specific locations of heritage resources within these areas. Imperial must avoid disturbing these heritage resources with its geotechnical activities. For the areas of Willowlake River and River Between Two Mountains, the resident Betsede, Boots and Yendie families must be invited to participate in the site visit to identify specific locations which must not be disturbed, to suggest timing of activities that would cause the least disruption to harvesting and other traditional activities, and to be alerted of the exact timing of Imperial Deh Cho Geotechnical Program activities in their traditional areas.

**Measure 15**

In order to prevent significant adverse environmental impact on the people and land of the Deh Cho region from the Imperial Deh Cho Geotechnical Program, regulatory authorities shall include in their authorizations those items set out in the Developer's Commitments, listed in Appendix C1 of the *Report of Environmental Assessment*, that are within their jurisdiction.

## **Suggestions**

### **Suggestion 1**

The Joint Review Panel for the Mackenzie Gas Project should take careful note of the high cultural, spiritual, social and ecological importance of the K'eotsee Lake watershed when assessing the Mackenzie Gas Project, including the conditions that the SKFN set out for borrow pit development in the K'eotsee Lake watershed.

### **Suggestion 2**

The Smbaa K'e First Nation (SKFN) should, when choosing Community Environmental Monitors for parts of the Imperial Deh Cho Geotechnical Program in areas traditionally used by both the SKFN and the Ka'a'Gee Tu First Nation (KGTFN), strive to hire an individual (or individuals) also acceptable to the KGTFN.

### **Suggestion 3**

Imperial should consider funding the hiring of Community Environmental Monitors by each of the four other affected first nation/aboriginal groups (the Ka'a'Gee Tu First Nation, the Liidlii Kue First Nation, the Jean Marie River First Nation, and the Metis Nation Local 52), for the geotechnical work to be done in their respective areas.

### **Suggestion 4**

To ensure that there is opportunity for Traditional Knowledge studies from the Liidlii Kue First Nation, the Metis Nation Local 52, the Pehdzeh Ki First Nation, the Jean Marie River First Nation and the Ka'a'Gee Tu First Nation to influence development design and planning, Imperial should meet with each of these organizations to discuss how to incorporate results of completed Traditional Knowledge studies into the design of the Imperial Deh Cho Geotechnical Program.

### **Suggestion 5**

Imperial should, in order to promote business development among first nation communities along the proposed Mackenzie Gas Project corridor, make public the weighting scheme for the criteria used in evaluating contract bids for the Imperial Deh Cho Geotechnical Program.

### **Suggestion 6**

Imperial and both the federal and territorial governments should make efforts to assist first nation communities affected by the Imperial Deh Cho Geotechnical Program and the proposed Mackenzie Gas Project to maximize economic benefits and minimize social and cultural impacts of Imperial's developments in the pipeline corridor region of the Deh Cho.

### **Suggestion 7**

The Joint Review Panel of the Mackenzie Gas Project should consider carefully the issue of whether developer-first nation relationships would be enhanced by agreements defining access rights and benefit distribution and whether such agreements should be

required for the Mackenzie Gas Project with all affected first nation communities throughout the Mackenzie Valley.

**Suggestion 8**

The Joint Review Panel of the Mackenzie Gas Project should review and carefully consider the social, cultural and ecological importance of the Blackwater River area when assessing the Mackenzie Gas Project.

**Suggestion 9**

Imperial should post notices of activity in visible locations in Tulita two weeks prior to work in areas of the program to the north of the Blackwater River, and distribute the same notice to the Tulita Renewable Resource Council. This will enable harvesters from Tulita to focus their efforts in other locations while temporary disturbances from the geotechnical program are affecting wildlife in a given location.

**Suggestion 10**

Imperial should ensure that the Willowlake River settlement's access road is not damaged by its activities during the Imperial Deh Cho Geotechnical Program.

**Suggestion 11**

Imperial should, at the end of the Deh Cho Geotechnical Program, prepare a report outlining the implementation status of each of its commitments so that regulatory authorities and parties to this EA can evaluate the effectiveness of these commitments from an impact mitigation standpoint.

## Appendix B: Acronyms Used in this Report

ABA	Access and Benefit Agreement
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
DAR	Developer's Assessment Report
DAS	Dehguh Alliance Society
DCFN	Deh Cho First Nations
DFO	Department of Fisheries and Oceans (Canada)
DOT	Department of Transportation (GNWT)
EA	Environmental Assessment
EC	Environment Canada
EIA	Environmental Impact Assessment
GNWT	Government of the Northwest Territories
IBA	Impacts and Benefits Agreement
IMA	Interim Measures Agreement
INAC	Indian and Northern Affairs Canada
IORVL	Imperial Oil Resources Ventures Limited ("Imperial")
IR	Information Request
KGTFN	K'a'a Gee Tu First Nation
LKFN	Liidlii Kue First Nation (Fort Simpson)
MGP	Mackenzie Gas Pipeline (proposed)
MOU	Memorandum of Understanding
MVEIRB	Mackenzie Valley Environmental Impact Review Board
MVLWB	Mackenzie Valley Land and Water Board
<i>MVRMA</i>	<i>Mackenzie Valley Resource Management Act</i>
NWT	Northwest Territories
PAS	Northwest Territories Protected Areas Strategy
PKFN	Pehdzeh Ki First Nation
PR	Public Registry Number for the EA
PWNHC	Prince of Wales Northern Heritage Centre
RWED	Department of Resources, Wildlife and Economic Development (GNWT)
<i>SARA</i>	<i>Species at Risk Act</i>
SKFN	Sambaa K'e First Nation
TK	Traditional Knowledge

## Appendix C1: Developer's Commitments

The table below summarizes the specific commitments made by Imperial Oil Resources Venture Limited (Imperial) throughout the EA03-009 (Deh Cho Geotechnical Program) process. The commitments were taken from Imperial's Developer's Assessment Report (DAR), two rounds of Information Requests (IRs), Technical Reports and responses, Imperial's meetings with parties, the three Public Hearings and various pieces of correspondence.

Commitments made by other parties responsible for some portion of the facilitation of the project (i.e., government agencies), are included in a separate Appendix C2.

Where commitments were made but are not contained in the table, Imperial is still expected to meet those commitments.

### NOTES:

**PR = Public Registry Number (See Appendix D for full listing of public registry)**

**DAR DR = Developer's Assessment Report Deficiency Response**

Component	Commitment
<b>Project Description</b>	
Main Contractor	All of the commitments made by Imperial regarding field program work will be honoured by ColtKBR (Fort Simpson Hearing Transcript, p. 65).
Scope of Project	Imperial will test a maximum of 43 borrow sites, 10 frost heave sites, and 5 water crossings in their Deh Cho Geotechnical Program (PR#114, Developer's Opening Presentation).
Camps	Imperial will maintain a maximum of 4 camps during the Deh Cho Geotechnical Program, with a maximum of 225 workers between them (PR#114, Developer's Opening Presentation).
	Sites will accommodate proper fuel storage and equipment-handling areas. Fuel storage will be provided in double-walled tanks (with automatic shut-off valves) located inside a bermed and lined area (PR#78, IR 5.0; DAR p. 5-4).
	Grey water will be stored in on-site tanks temporarily, and only discharged when cool. All camp garbage will be incinerated in an approved burning unit at the camp, and all hazardous and construction waste will be disposed of at approved facilities. Camp sewage will be disposed of at a regulated community facility (DAR p. 5-13).
	Imperial will enforce an alcohol and drug-free workplace, including camps (IR 1.4a; DAR p. 5-13).



Access to Work Sites	Imperial will limit activities to within a 4 kilometre corridor (2 km on either side of the Enbridge right-of-way) in the Edehzhie area (IR 1.6e).
	Imperial commits that only 10% of affected areas for geotechnical work will be new clearing, 90% being re-clearing secondary growth (Wrigley Public Hearing Notes).
	Imperial commits to keeping a narrow corridor of 6 metres when cutting access to work sites (Fort Simpson Hearing Transcript, p. 79).
	Where Imperial installs temporary ice bridges over watercourses, only clean snow and water will be used, and the roadway will be v-notched on removal, following DFO guidelines (DAR p. 5-3).
	If extreme mild conditions or lack of snow is encountered on access corridors, additional snow and ice will be brought in to provide additional cover. All access trails will be monitored for bare spots and rutting during the program. Field operations will be suspended during periods of either extreme cold (below a set minimum point) or continued mild temperatures, which could affect impact of machines on soil (DAR p. 7-2).
Test Sites	At borehole locations, a maximum of 10 metres x 10 metres will be cleared of vegetation. Cut trees will be stacked at the side of the access. No area around the borehole is stripped of surficial organic material. Once drilling is completed, drill cuttings will be placed in the hole forming a level contour with the surrounding surface. Excess material is to be removed for disposal (IR 2.23)
	At test pit locations, a maximum of 25 metres x 25 metres will be cleared of vegetation. Organic surficial material will be pushed to one side on an area 6 metres x 6 metres. The actual test pits are a maximum of 5 metres x 5 metres in size, to a depth of 5 metres. Organic material and inorganic material (spoil) will be separated. Once tests are complete, inorganic material will be placed back in the pit first, followed by a crown of organic surficial material (IR 2.23).
<b>Winter Road Maintenance</b>	
	Imperial will work closely with the GNWT DOT and the approved DOT local contractor, to ensure that the roads (Mackenzie Highway, Mackenzie Highway winter road north of Wrigley, and the Trout Lake Winter Road) are maintained and upgraded to a standard which ensures that Geotechnical Program related traffic does not hinder use of the road by the public (IR 2.10a; 2.10b).
	The oil and gas industry, including Imperial, has committed to providing a higher level of service on the Mackenzie Valley Winter Road from Wrigley (km 690) to Tulita (km 938). The work includes accelerating the winter road opening time, extending the operating season and providing maintenance, as required (PR#136, DOT response to IR).

	Imperial agrees to provide additional maintenance on the Trout Lake Winter Road in conjunction with the existing maintenance contractor (PR#136, DOT response to IR).
<b>Winter Road Safety</b>	
	Imperial will ensure its contractors establish a maintenance program to maintain all local roads used by the program. If local road conditions deteriorate and repairs are warranted, Imperial will ensure its contractor make the necessary repairs in a timely and effective manner (DAR p. 9-3).
	Following the receipt of project approvals, Imperial commits to put in place the necessary upgrades and the necessary maintenance to ensure that the Trout Lake Winter Road is safe for everybody to use (Fort Simpson Hearing Transcript, p. 49).
Traffic Concerns	Program traffic through Fort Simpson will be staggered so as to not disrupt traffic through the village. No asphalted town roads would be driven over (Antoine Drive will be the major corridor), and the axle loads of the vehicles will not exceed any traditional loadings. Imperial will monitor the condition of all access roads and community streets used in the program and respond to any concerns raised by the Village of Fort Simpson regarding traffic issues, and will consult with same prior to movement of heavy loads along Antoine Drive (IR 2.17a; 2.17b; 2.17c; DAR p. 9-3).
	Imperial commits to moving the Trout Lake Camp 3 km south of the Trout Lake Winter Road, in part to reduce concerns about traffic congestion (IR 1.5c).
	Imperial commits to implementing speed control policies which will maintain the safety of all users of Highway #1 (DAR p. 9-4; Developer's Closing Statement, PR#140).
	When moving heavy equipment, Imperial contractors will pull over to the side and allow other traffic to pass, and communicate with other road users over the radio of their presence (Fort Simpson Hearing Transcript, p. 63).
<b>Reclamation of Sites and Access Concerns</b>	
	Imperial commits to using the method of rolling back slash to limit inappropriate use of access trails and clearings by hunters, fishers and trappers (IR 2.19a; DAR DR 10.1).
	Pending approval of this practice by INAC, Imperial is willing to create "tripods" of timber in clearing areas, so as to avoid inappropriate access by hunters from helicopters (Fort Simpson Hearing Transcript, p. 74-5).

	At the end of the program and in the following summer, investigation sites and access are to be inspected by community environmental monitor, environmental supervisor for Imperial, and INAC inspectors (PR#114, Developer’s Opening Presentation).
	Areas where sites require revegetation measures will be seeded with either a non-persistent annual species or a mix of native grass species (DAR DR 10.1).
<b>Contracting – ABAs</b>	
Contracts	Imperial will only place advertisements for bids and pre-qualification in Northwest Territories newspapers. (IR 2.5; IR 2.6).
	Imperial will give “preference to businesses in the Deh Cho Region, with priority to Deh Cho corridor businesses in all evaluations” (IR 2.6).
	Imperial will break “down work scopes into smaller packages to allow local companies greater access to the opportunity” (IR 2.6).
	Imperial will be “restricting bid lists to Deh Cho Region businesses (including joint venture businesses) when there are at least two businesses that can supply the required goods or services” (IR 2.6).
	Imperial commits that its main contractor, ColtKBR, will have practices related to contracting out that meet the standards and expectations of Imperial (IR 2.6).
	Imperial has a requirement for all successful contractors to hire locally wherever possible (DAR, p. 2-5).
<b>Harvester’s Compensation</b>	
	Imperial will work with communities to help identify potentially impacted trappers. Imperial will contact these trappers to address possible prevention and mitigation measures. If a trapper suffers a loss or damage as a result of Program activities, Imperial will compensate that trapper for actual loss or damage. Imperial’s compensation offer for fur loss will be based on market value of the fur and estimated harvest loss (referenced to current and historic records). If unable to reach an individual compensation agreement, Imperial would propose a mediation or arbitration process (IR 2.20).
	Imperial commits to having many different mechanisms by which affected harvester’s can communicate with them: directly with Imperial, contractors, Band offices, renewable resource committees, regional and local liaison persons (Fort Simpson Hearing Transcript, p. 83).
	Imperial will consider claims for losses from hunters, trappers and harvesters, in a “fair and equitable manner”, including losses in the number of animals available for hunting in an area (Fort Simpson Hearing Transcript, pp. 38-9).

<b>Community Environmental Monitors</b>	
	Community Environment and Wildlife Monitors are not controlled by Imperial or ColtKBR. The Community Environment and Wildlife Monitors are to be hired by and be responsible to their communities, but funded by Imperial. Their responsibilities are outlined in the Environmental Protection Plan filed with MVLWB. Imperial will provide one to two days of training to these Monitors. The communities will bill ColtKBR for these services according to an agreed set of terms. Community Environmental Monitors, as well as any other program worker, can shut down work at any time if they are concerned about environmental or heritage resource effects (IR 2.7; DAR p. 9-9; Developer’s Closing Statement, PR#140).
	Imperial commits to having its environmental inspector transmit records of activities and effects daily to management, regulators and other stakeholders, as required (DAR p. 5-29).
	Environmental monitoring will remain ongoing after the program is complete. After spring thaw, monitors will check to ensure that surfaces are stable and drainage has not been disrupted or altered. If any remedial measures are required, these areas will be inspected twice annually until they have stabilized (DAR p. 6-3).
<b>Future TK Study Results</b>	
	Imperial is committed to supporting TK studies along the proposed pipeline corridor, one of the main objectives of which is to gather information about traditional land uses, for the purposes of identifying and adjusting the MGP plans to any potential conflicts related to land use (IR 1.7d).
	Input from any TK studies that are published before or during the Deh Cho Geotechnical Program will be integrated into the Program design on an ongoing basis. To the extent possible, the Program will be revised to integrate information from the TK studies as it becomes available (IR 2.21).
<b>Heritage Resources</b>	
	“If unexpected heritage resources are encountered during activities, all work in the immediate area will stop” and “all supervisory staff will be provided a manual detailing procedures to follow should [they] be encountered” (consisting of the Heritage Resources Protection Plan and Environmental Protection Plan )(DAR p. 9-9; p. 9-11; IR 2.16d).

	ColtKBR staff will receive maps of heritage resource locations on an as-needed basis only, and only the following employees: field superintendent, supervisory and environmental staff, environmental inspector, program engineer, and topographical surveyor (IR 2.16a).
	Community Wildlife and Environmental Monitors will be present to examine the evidence of heritage resources (IR 2.16b). Wildlife and Environmental Monitors, as well as any Program staff, can shut down work if they suspect heritage resources are uncovered. Any work stoppage is then to be reported to the Field Superintendent <i>and to the local community monitors</i> (DAR p. 9-9, emphasis added) for further action as set out in the Environmental Protection Plan. Excavation will not be allowed to proceed until the archaeologist, environmental inspector and community monitor give approval to proceed (IR 2.16c; DAR p. 9-9).
	A pre-disturbance heritage resources impact assessment will be completed at all locations of high potential for heritage resources. An interim report will be submitted to PWNHC for review. Post-disturbance impact assessment will also be used in any areas of moderate potential (DAR p. 9-10).
	No pipeline crossing of the Kakisa River (an area for high local heritage resource concern) is contemplated by Imperial (IR 2.28b).
<b>Socio-economic Concerns</b>	
	If it is found that re-supply of the camps from local sources will negatively affect local residents, supplies will be procured from southern sources (IR 2.11).
	Imperial intends to purchase potable water from the communities nearest the camps whenever feasible, and use local contractors for sewage disposal (to sewage treatment facilities) as well (IR 2.30).
	Camp workers will be oriented at the beginning of the program on cross-cultural awareness, camp rules and enforcement procedures. Camp policy restricts workers from visiting aboriginal communities, and enforces a drug and alcohol free workplace and camp. When on leave, camp workers will be transported to their permanent residence or place of hire. Imperial commits to setting up regular meetings between senior camp staff and community leaders to maintain communication over any concerns (DAR DR 2.0; DAR p. 5-13).
	Merchantable timber (>13 cm at the butt) will be decked along the primary access trail so as to be made available to local communities (DAR DR 10.1).
	Imperial commits to making data from soil sampling – especially on gravel sources – available to PKFN (Wrigley Public Hearing Notes).

<b>Culturally Significant Sites</b>	
K'eotsee Lake	Imperial agrees to drop proposed site 20.003P and restrict project development in this area. Further, Imperial agrees to look for alternative granular sources farther away from K'eotsee, including added site 20.004PC (PR#134, Imperial Undertaking).
	Imperial agrees to drop site 20.004PB directly east of K'eotsee (PR#134, Imperial Undertaking).
Blackwater River	Imperial (and MGP) are prepared to review the proposed compressor site near Blackwater River, and to look at options with [PKFN] at their request (IR 2.29).
	Imperial will work with the Dehguh Alliance Society and Pehdzeh Ki First Nation to select a camp location in the vicinity of the Blackwater River that is acceptable to these parties (Developer's Closing Statement, PR#140).
Willowlake River – Wrigley Sites	Imperial agrees to accommodate families living at Betsedea during the Program activities (Developers Closing Statement, PR#140).
<b>Wildlife and Wildlife Habitat</b>	
	Disturbance associated with overflights will be reduced by instituting minimum altitude restrictions and avoidance of large concentrations of wildlife (DAR DR 8.0).
	All workers will be informed of policy prohibiting feeding or harassment of wildlife. Wildlife-proof containers will be used for the disposal of food wastes (DAR p. 5-16).
<b>Soil and Vegetation</b>	
	To mitigate the loss of vegetation, all root masses will be left intact and there will be no disturbance to the ground surface during clearing operations (DAR DR 7.0).
	Snow will be packed to provide ground cover protection. Where insufficient snow pack is encountered, water will be used to build a layer of ice to reduce disruption of the ground cover (DAR p. ii).
	Where new access is required and where tree cover must be cleared, dozers will be equipped with blade shoes that elevate the blade above the soil surface (DAR p. 5-5).
	Where snow road construction is required, compacted snow or ice will be placed to a minimum depth of 0.10 m. Work will be conducted on frozen soil conditions prior to this construction (DAR p. 5-9).

<b>Uncommon Vegetation Types</b>	
	<p>Areas of uncommon or sensitive vegetation types and communities will be avoided, where possible. Impacts will be minimized in areas that cannot be avoided using the following techniques:</p> <ul style="list-style-type: none"> <li>• Restricting activities to winter;</li> <li>• Hand cutting trees and shrubs in sensitive areas and along stream buffers;</li> <li>• Construction of snow ramps or ice bridges to protect the bases of the shrubs in riparian areas;</li> <li>• Use of snow or ice road buffers in bogs;</li> <li>• Reducing grading and leveling to that required to prepare a safe and efficient working surface. (IR 2.9).</li> </ul>
	<p>“Known rare plant locations will be avoided and locations buffered by a 30m radius where possible”. Specifically, the dwarf clubrush, found in a small rich fen in the Smith Creek valley, will be avoided by 30 metres (IR 2.9).</p>
	<p>Equipment will be cleaned prior to entering undisturbed areas, reducing the likelihood of introducing invasive species (IR 2.9).</p>
	<p>Imperial commits to surveying all areas that might be affected by the Geotechnical Program for the presence of rare plants and vegetation communities of concern, before work starts in the area (DAR, pp. 4-5).</p>

## Appendix C2 – Commitments Made by Other Parties

<b>Component</b>	<b>Commitment</b>
<b>Winter Road</b>	DOT has committed up to \$50,000 for right-of-way enhancements on the Trout Lake Winter Road. DOT will also have a 18 metre portable bridge available for use along the Trout Lake winter road (PR#136, DOT Response to IR).



## Appendix D: Public Registry Index

**Imperial Oil Resources Ventures Ltd.**  
*Deh Cho Geotechnical Program*  
MVEIRB Ref. No. EA-03-009

<b>Item Number</b>	<b>Description</b>	<b>Originator</b>	<b>Date Received/Sent</b>
1	Concerns re. adverse impacts to traditional land	Chief Tim Lennie, Wrigley Band	16-Feb-04
2	Concerns re. adverse impacts to traditional land	President Marie Lafferty, Ft Simpson Metis Nation	18-Feb-04
3	Concerns re. adverse impacts to traditional land	Chief Fred Norwegian JMR	18-Feb-04
4	Concerns re. adverse impacts to traditional land	Chief Dennis Deneron, Trout Lake	18-Feb-04
5	Concerns re. adverse impacts to traditional land	Chief Keyna Norwegian, Fort Simpson	19-Feb-04
6	Concerns re. adverse impacts to traditional land	Chief Dennis Deneron Trout Lake	20-Feb-04
7	Referral of Imperial Oil GeoTech for EA	Vern Christensen, MVEIRB	26-Feb-04
8	Referral of Imperial Oil GeoTech Field Investigations	Vern Christensen, MVEIRB	26-Feb-04
9			
10	Imperial Oil Resources Land Use Permit application	Ka'a' Gee Tu First Nation	25-Feb-04
11	Community correspondence-Imperial Oil request	Alan Ehrlich,MVEIRB	3-Mar-04
12	Reason For Decision-Imperial Oil	Todd Burlingame, MVEIRB	2-Mar-04
13	Referral of Imperial Oil Resources to EA	Vern Christensen, MVEIRB	3-Mar-04
14	Referral of Imperial Oil Resources to EA	Vern Christensen, MVEIRB	3-Mar-04
15	Referral of Imperial Oil Resources to EA	Vern Christensen, MVEIRB	3-Mar-04
16	Referral of Imperial Oil Resources to EA	Vern Christensen, MVEIRB	3-Mar-04
17	Referral of Imperial Oil Resources to EA	Vern Christensen, MVEIRB	3-Mar-04
18	Reason For Decision-Imperial Oil	Todd Burlingame, MVEIRB	2-Mar-04
19	Imperial Geotechnical	Alan Ehrlich,MVEIRB	3-Mar-04
20	Reason For Decision-Imperial Oil	Alan Ehrlich,MVEIRB	4-Mar-04
21	Type A Land Use Permit Application	Imperial Oil Resources	1-Oct-03
22	Type B Water License Application	Imperial Oil Resources	1-Oct-03
23	Request for Meeting-James R. Hawkins	Imperial Oil Resources	9-Mar-04
24	Referral of Imperial Oil To EA	Vern Christensen, MVEIRB	26-Feb-04
25	Community Concerns re. Imperial Oil	Alan Ehrlich,MVEIRB	5-Mar-04

26	Community Concerns re. Imperial Oil	Chief Dennis Deneron, Trout Lake	30-Mar-04
27	See PR item #26	Alan Ehrlich, MVEIRB	31-Mar-04
28A	Imperial Oil's proposed Winter Geotechnical Work	Herb Norwegian, DCFN	2-Apr-04
28B	Corrections to Reason for Decision	Todd Burlingame, MVEIRB	5-Apr-04
29A	Imperial Geotechnical	Alan Ehrlich, MVEIRB	7-Apr-04
29B	Draft TOR for EA	MVEIRB	20-Apr-04
30	Draft TOR for EA	Alan Ehrlich, MVEIRB	20-Apr-04
31	TOR/workplan draft review Deh Cho Geotechnical	Wade Romanko, Env Cnd	26-Apr-04
32	Draft TOR for EA-Land Use & Water License	Jim Hawkins, Imperial Oil	30-Apr-04
33	Draft TOR/workplan Winter Geotechnical	Chief Keyna Norwegian, Fort Simpson	4-May-04
34	Comments on TOR/Workplan	Lorraine Seale-INAC	4-May-04
35	Draft TOR/workplan Winter Geotechnical	Bruce Hanna, DFO	5-May-04
36	Information Requests - 2003 Deh Cho Region	MVLWB	various dates
37	Preliminary Screening correspondence	Various	various dates
38	Draft TOR Comments Received	Alan Ehrlich, MVEIRB	6-May-04
39	Draft TOR	JR Hawkins, Imperial Oil	13-May-04
40	Final TOR for Imperial/Geotech EA	Vern Christensen, MVEIRB	21-May-04
41	Terms of Reference/Workplan	MVEIRB	21-May-04
42	Note to File re. DAR late submission	Alan Ehrlich, MVEIRB	31-May-04
43	Draft TOR EA for LUP & Water License application	Jim Hawkins, Imperial Oil	13-May-04
44	DAR Distribution # of copies required	Alan Ehrlich, MVEIRB	8-Jun-04
45	Aerial photos	Alan Ehrlich, MVEIRB	8-Jun-04
46	MVEIRB Decision on status of parties	Vern Christensen, MVEIRB	14-Jun-04
47	DAR - 2004 Winter Investigation Program	Peter Grout, Imperial Oil	28-Jun-04
48	2004 EA-DAR	Distribution list	1-Jun-04
49	Board Decision	Vern Christensen, MVEIRB	14-Jun-04
50	DAR	Jim Hawkins, Imperial Oil	28-Jun-04
51	DAR	Peter Grout, Imperial Oil	28-Jun-04
52	MVEIRB Decision on party status	David Livingston, INAC	30-Jun-04
53	ID of EA Roles	Deh Gah Gotie Dene	5-Jul-04
54	Conformity check - DAR	Alan Ehrlich, MVEIRB	14-Jul-04
55	DAR DehCho Geotech	Peter Redvers, HR	26-Jul-04
56	email from Joe Acorn	Joe Acorn	28-Jul-04
57	Correspondence between DCFN & Colt KBR	Larry Graburn, ColtKBR	27-Jul-04
58	Email Joe Acorn	Joe Acorn	30-Jul-04
59	response to deficiency statement	P.D Grout	11-Aug-04
60	deficiency response and conformity	Alan Ehrlich, MVEIRB	25-Aug-04
61	Information Requests	Alan Ehrlich, MVEIRB	15-Sep-04
62	Correspondence from Dehcho Pipeline	Joe Acorn	20-Sep-04

	Working Group		
63	Response to IR's re EA03-009	Chief Dennis Deneron	23-Sep-04
64	Response to IR's re EA03-009	P.D. Grout	29-Sep-04
65	NOTE TO FILE -phone conversation w/Wilson Dimsdale	Alan Ehrlich, MVEIRB	8-Oct-04
66	RE IR request (CD/Maps)EA 03-009	Jim Hawkins, Imperial Oil	5-Oct-04
67	Recent correspondence hearings	Alan Ehrlich, MVEIRB	15-Oct-04
68	Recent Public Registry Files	Alan Ehrlich, MVEIRB	15-Oct-04
69	Response to IR's re EA03-009 (Joe Acorn)	JR Hawkins, Imperial Oil	7-Oct-04
70	Response to IR's re EA03-009 (Joe Acorn)	JR Hawkins, Imperial Oil	7-Oct-04
71	Response to IR's re EA03-009 (Joe Acorn)	JR Hawkins, Imperial Oil	7-Oct-04
72	Concern re process/progress EA03-009	Peter Grout, Imperial Oil	15-Oct-04
73	Info request Dehcho Pipeline Working Group	Chief Keyna Norwegian, Fort Simpson	18-Oct-04
74	copy of letter to Darryl Becker from Saamba Ke DB	Chief Dennis Deneron	24-Aug-04
75	email copy re. Geotech conformity response	Alan Ehrlich, MVEIRB	25-Aug-04
76	Deh Cho Drum AD re. notice of Public Hearing		
77	Response to IR re. DAR	PD Grout, Imperial Oil	29-Sep-04
78	Response to IR to Pipeline working group	JR Hawkins, Imperial Oil	7-Oct-04
79	Proposed IR	Mary Tapsell, MVEIRB	28-Oct-04
80	Reasons for Decision	John Holman, PWG	2-Nov-04
81	INAC response to IR	Lorraine Seale, INAC	5-Nov-04
82	Response to DCFN letter re. IR & INAC	Mary Tapsell, MVEIRB	10-Nov-04
83	Developer response to MVEIRB round 2 IR	Jim Hawkins, Imperial Oil	10-Nov-04
84	Developer response to MVEIRB round 2 IR	Ewa Kowalchuk, Esso	11-Nov-04
85	Imperial Round 2 IR response	S.D. Martin, Imperial Oil	11-Nov-04
86	response to IRs round 2	Joe Acorn, DCPWG	12-Nov-04
87	Imperial Oil winter geotech work in the Deh Cho	Joe Acorn, DCPWG	15-Nov-04
88	responses to IR round two	Gavin More, RWED	16-Nov-04
89	Supplementary IR Developers response to Round 2	Jim Hawkins, Imperial Oil	22-Nov-04
90	Pre-hearing Conference worksheet	Imperial Oil Resources	22-Nov-04
91	pre-hearing worksheet	DehGah Gotie Dene Council	22-Nov-04
92	pre-hearing worksheet	Sambaa Ke Dene Band	22-Nov-04
93	pre-hearing worksheet	Dehgah Alliance Society	23-Nov-04
94	pre-hearing worksheet	Liidlii Kue First Nation	23-Nov-04
95	update on pre-hearing conference/agenda	interested parties	23-Nov-04

96	Round 2 IR response comments	Wade Romanko, Environment Canada	27-Oct-04
97	Pre hearing conference info	Alan Ehrlich, MVEIRB	19-Nov-04
98	Public Service Announcement-CBC Radio	Alan Ehrlich, MVEIRB	19-Nov-04
99	Imperial Geotech EA Technical Report	Gavin More, RWED	19-Nov-04
100	Pre-hearing Conference worksheet	Wade Romanko, EC	19-Nov-04
101	Pre-hearing conference	Young B.DFO-MPO-GC	22-Nov-04
102	Pre-hearing Conference worksheet	Kelly Pennycook, Pehdzeh Ki First Nation	23-Nov-04
103	Position Paper on Proposed Mackenzie Gas project	Deh Gah Got'ie Dene & Fort Providence Metis	10-Oct-04
104	Requesting: Presentation outlines due Nov 29-04	Alan Ehrlich, MVEIRB	24-Nov-04
105	Imperial Geotechnical Program Pre-hearing conference Notes.	Alan Ehrlich, MVEIRB	24-Nov-04
106	Pre-hearing conference Material	Doug Bryshun	24-Nov-04
107	SKDFN Draft Compensation Agreement.Attached.	Alan Ehrlich, MVEIRB	25-Nov-04
108	Attendance at Technical Hearing for Imperial Geotechnical EA	Alan Ehrlich, MVEIRB	25-Nov-04
109	Presentation: EA03-009 Imperial Oil Geotechnical Program in DehCho Region	Chief Dave Moses, PKFN	27-Nov-04
110	Reply: Presentation outlines due Nov 29-04	Greg Nyuli	29-Nov-04
111	Dehguh Alliance Society concerns - winter work geotech	Chief Keyna Norwegian, Fort Simpson	26-Nov-04
112	Response to VC letter re. INAC attendance	David Livingstone, INAC	26-Nov-04
113	copy of item #111 to Todd Burlingame	John Holman, PWG	29-Nov-04
114	Updated IOL developers opening statement	Ewa Kowalchuk, Esso	29-Nov-04
115	Summary of presentation by Sambaa Ke Development Corporation	Sambaa Ke Dene Band	30-Nov-04
116	EA hearings notes	review board staff	30-Nov-04
117	SKDB issues and position paper	Peter Redvers, HR	1-Dec-04
118	Final draft PKFN	Kelly Pennycook, Pehdzeh Ki First Nation	1-Dec-04
119	Sign-in sheet Saambaa Ke Community Hearing		30-Nov-04
120	Wrigley Hearing sign in sheet		1-Dec-04
121	Ft Simpson Hearing sign in sheet		2-Dec-04
122	Draft community hearing agenda		
123	A request for ruling re. Dehguh Alliance society	Alan Ehrlich, MVEIRB	6-Dec-04
124	December 2 meeting concerns	Alan Ehrlich, MVEIRB	6-Dec-04
125	Review Board's IR to DOT	Alan Ehrlich, MVEIRB	6-Dec-04
126	December 2 meeting concerns	Raymond Michaud	7-Dec-04
127	Trout Lake Hearing Notes	Alan Ehrlich, MVEIRB	8-Dec-04

128	IR responses MVEIRB	Ewa Kowalchuk, Esso	7-Oct-04
129	Imperial Geotech EA Technical Report	Alan Ehrlich, MVEIRB	15-Nov-04
130	DehCho Geotech investigation proposed by the MGP	Chief Keyna/E.Browning	30-Nov-04
131	Hearing Content LUP application	Imperial Oil Resources	Nov/Dec/04
132	Wrigley community hearing NOTES	review board staff	1-Dec-04
133	Proposed 2004 Winter Geotech Program in DC Territory	RJ Ottenbreit	1-Dec-04
134	Imperial re. Undertakings response	Imperial Oil Resources	2-Dec-04
135	Ft Simpson Public hearing transcripts	Digi-tran INC	2-Dec-04
136	responses to IR round two	Greg Cousineau, DOT	6-Dec-04
137	Nov 10th letter to the PWG re winter work IR's	Mary Tapsell MVEIRB	9-Dec-04
138	Translated & Transcribed statements fr Wrigley PH	Joe Acorn	9-Dec-04
139	Liidlii Kue oppose work again	Derek Neary/Northern News	13-Dec-04
140	Developers closing statement	JR Hawkins, Imperial Oil	14-Dec-04
141	Infrastructure & Logistics	Imperial Oil Resources	1-Dec-04
142	permit applications community info packages	Imperial Oil Resources	01-Dec-04
143	Undertaking	Imperial Oil Resources	02-Dec-04
144	technical report from Dehgah Alliance Society	Keyna Norwegian	09-Dec-04

## Appendix E: MVEIRB Authority to Impose Measures and Make Suggestions

Legal consequences flow from the Review Board's determinations. Where the Review Board determines that a significant adverse impact on the environment is likely or that mitigative or remedial measures are required to prevent a significant adverse impact on the environment, it may make recommendations for consideration by the federal and responsible Ministers. This authority is based on section 128 of the *MVRMA* and provisions in the *Gwich'in and Sahtu Dene and Métis Comprehensive Land Claim Agreements*. If the federal and responsible Ministers accept the Review Board's recommendations, "a first nation, local government, regulatory authority or department or agency of the federal or territorial government affected by a decision made under this section shall act in conformity with the decision to the extent of its authority" (*MVRMA*, subsection 130(5)).

During the EA, the Review Board can consider the effects of a development in light of government activities, policies and operations. The Board also considers the development in relation to other developments. Even where significant adverse environmental impacts are not identified, the EA process may result in insights about the development, the development process, or the potential response to the development by government agencies and others. In such instances, the Review Board may make non-binding suggestions to government and other authorities. These suggestions are intended to help government and others affected to encourage a more comprehensive response to the development. Implementation of suggestions is not mandatory even if the federal and responsible Ministers accept this *Report of Environmental Assessment*.

The Review Board's legal authority to make recommendations to mitigate the impacts of the proposed development is based on the *MVRMA* and on the language of subsections 24 and 25, respectively, of the *Gwich'in and Sahtu Dene and Métis Comprehensive Land Claim Agreements*. The Board's interpretation of these authorities is set out below. Subsection 128(1) of the *MVRMA* outlines the Review Board's options upon completion of an EA as follows:

*128. (1) On completing an environmental assessment of a proposal for a development, the Review Board shall,*

- (a) where the development is not likely in its opinion to have any significant adverse impact on the environment or to be a cause of significant public concern, determine that an environmental impact review of the proposal need not be conducted;*
- (b) where the development is likely in its opinion to have a significant adverse impact on the environment,*

- (i) *order that an environmental impact review of the proposal be conducted, subject to paragraph 130(1)(c), or*
  - (ii) *recommend that the approval of the proposal be made subject to the imposition of such measures as it considers necessary to prevent the significant adverse impact;*
- (c) *where the development is likely in its opinion to be a cause of significant public concern, order that an environmental impact review of the proposal be conducted, subject to paragraph 130(1)(c); and*
- (d) *where the development is likely in its opinion to cause an adverse impact on the environment so significant that it cannot be justified, recommend that the proposal be rejected without an environmental impact review.*

The Review Board's authority to make recommendations arises in the context of subparagraph 128(1)(b)(ii) of the Act. A reading of paragraph (b) and subparagraph (ii) indicates that the Review Board has the authority to recommend measures to mitigate impacts when the Board has found a significant adverse environmental impact.

The language in these provisions also seems to require that any recommendations made must be directly linked to the finding of a significant adverse environmental impact. A strict interpretation of this paragraph could prevent the Review Board from recommending measures to prevent adverse environmental impacts from becoming significant. In other words, a strict reading of paragraph 128(1)(b) and subparagraph (ii) could arguably indicate that if an adverse environmental impact is not already significant then the Review Board has no authority to recommend measures to reduce or prevent a significant adverse impact (this is called the "restrictive interpretation" below). This result is not consistent with good EA practice.

One of the important benefits of an EA is the opportunity to minimize all identified adverse impacts through the imposition of mitigative measures. Consequently, the Review Board has adopted a more remedial interpretation of 128(1)(b). This interpretation is in keeping with the overall purpose of *MVRMA* and the land claims upon which the Act is based. There is clear authority for such an interpretation of paragraph 128(1)(b) and subparagraph (ii). The Board's reasons are outlined below.

Any measures recommended by the Review Board under paragraph 128(1)(b) are considered by the federal and responsible Ministers under paragraph 130(1)(b) of the *MVRMA*. If the recommended measures are adopted, they must be carried out by responsible Ministers to the extent of their jurisdiction under subsection 130(5) and by the Land and Water Boards under section 62. The EA process is linked to the regulatory process and adopted by the appropriate decision-makers and must be carried out by regulatory authorities. The result is the "integrated system of land and water management" referred to in the long title of the *MVRMA* and required by the Gwich'in and Sahtu land claims.

The interpretation of paragraph 128(1)(b) will determine whether the Review Board has the authority to recommend measures to mitigate any adverse environmental impacts which might become significant, or only those which have already been determined to be significant. This distinction is important and strikes at the heart of the EA process under the *MVRMA*. If the restrictive interpretation prevailed, the EA process may fail to achieve these statutory goals expressed in section 115 of the *MVRMA*. This section speaks to the need to protect the environment and the social, economic and cultural wellbeing of residents of the Mackenzie Valley. The Review Board's view is that ignoring evidence of adverse impacts which can be mitigated because the impacts are not yet significant is not consistent with the *MVRMA* or with the Review Board's duty to protect the environment. The Review Board has considered this issue and has decided that it has the authority to recommend measures to reduce the effect of a significant adverse environmental impact below the level of significance and measures to prevent an adverse environmental impact from becoming significant.

The authority for this interpretation is based in section 24.3.5 (a) of the *Gwich'in Comprehensive Land Claim Agreement* and in section 25.3.5 (a) of the *Sahtu Dene and Metis Comprehensive Land Claim Agreement*. These sections are identical so the relevant portion of Sahtu claim only is reflected below:

*25.3.5 (a) subject to 25.3.3(a), a development proposal shall be assessed by the Review Board in order to determine whether the proposed development will be likely to have a significant adverse impact on the environment or will likely be a cause of significant public concern. In making its determination the Review Board may consider terms and conditions to the proposed development which would prevent significant adverse impact on the environment and may recommend the imposition of such terms and conditions to the Minister. Such terms and conditions shall be subject to review pursuant to 25.3.14.*

This provision clearly intended that the Review Board be able to recommend terms and conditions (measures) to the Minister to “prevent significant adverse impact on the environment”. This authority goes beyond the restrictive interpretation of paragraph 128(1)(b) discussed above. It does not require that an impact already be determined to be significant before the Review Board can recommend measures. Instead the Review Board can recommend measures to prevent an impact which is not yet significant from becoming so.

In this regard, the restrictive interpretation of paragraph 128(1)(b) of the *MVRMA* is not consistent with these paragraphs of the *Gwich'in* and *Sahtu* land claims. The Review Board is therefore of the view that the interpretation of paragraph 128(1) (b) should be more liberal in order to make it consistent with the land claims and with section 115 of the *MVRMA* as well.



Section 3.1.18 of the Sahtu Land Claim (3.1.19 of the Gwich'in claim) specifies that the Agreement may be used as an aid to interpretation where there is any doubt in respect of any legislation implementing the provisions of the Agreement. Section 3.1.22 of the Sahtu land claim (3.1.23 of the Gwich'in) and part 5 of the *MVRMA* specify that when there is an inconsistency or conflict between any law and a land claim agreement that the land claim agreement applies to the extent of the inconsistency or conflict. This legal hierarchy is clear. The land claim provisions are paramount. Consequently, the Review Board has the authority to recommend measures both to reduce significant adverse environmental impacts below the level of significance and to prevent adverse environmental impacts from becoming significant. This finding is in keeping with good EA practice and is consistent with both the Gwich'in and Sahtu land claims.