Item 1. Overland transportation from current barge site

To clarify, there is no road from the existing barge landing site and there is no intention of building a road to this area. When assessing the potential impacts on land for the project, and keeping in mind our objective to minimize impacts, it became very clear that using the existing barge landing site would involve building a road link and building at least one additional bridge. When looking at this possible option, our geotechnical consultants identified concerns with the bridge crossing due to it being mainly constructed on thick marine clays. The other issue was that there was no clear conclusion that some form of jetty would not be required regardless and, as mentioned above, when MHBL considered the overall impacts, it was decided to proceed with a marine jetty as the project description clearly states.

Item 2. Transporting Project construction materials to mine site

Similar to the response in Item 1 above, there is no road from the existing barge landing site and in fact never has been and as stated in Item 1, there are no plans to do so, based on the reasoning in our response in item 1. Transport of equipment and supplies from the existing barge landing site over the last four (4) seasons has been carried out during the period of January – May, subject to both the timing of camp start up and spring thaw. The winter road used in this instance is entirely on the sea ice of Roberts Bay to the approximate location of the planned jetty, which connects up to the winter road route used during the annual re-supply in support of the exploration program. The winter road is on Inuit Owned lands and is operated under KIA land Use Licenses.

Item 3. Marine jetty

There is no additional design memo on the Jetty which accompanies Table 2 and the six drawings of the three jetty alternatives presented Section 3(b) of the Supplemental Information for Technical Discussions, presented by MHBL during the Technical Sessions held in Yellowknife from March 30-April 1, 2004. This table and drawings was prepared in response to an information request by the Department of Fisheries and Oceans (DFO) in a letter dated January 30, 2004 (included under Section 3.0 of the above mentioned document).

DFO had requested that the proponent present alternative jetty designs and cost estimates that would minimize the physical destruction of fish habitat and reduce coastal sediment transportation by wave/tidal action, impacts of water circulation changes and the impediment of fish passage. The drawings of the three jetty alternatives covered the following:

- Option 1 – Rock-fill jetty (presented in Supporting document A4 of the FEIS)
- Option 2 – Rock-fill jetty with steel bridge modules on rock-fill buttresses.
- Option 3 – Rock-fill jetty with steel bridge modules on piles
- Option 4 – Rock-fill jetty with arch culverts

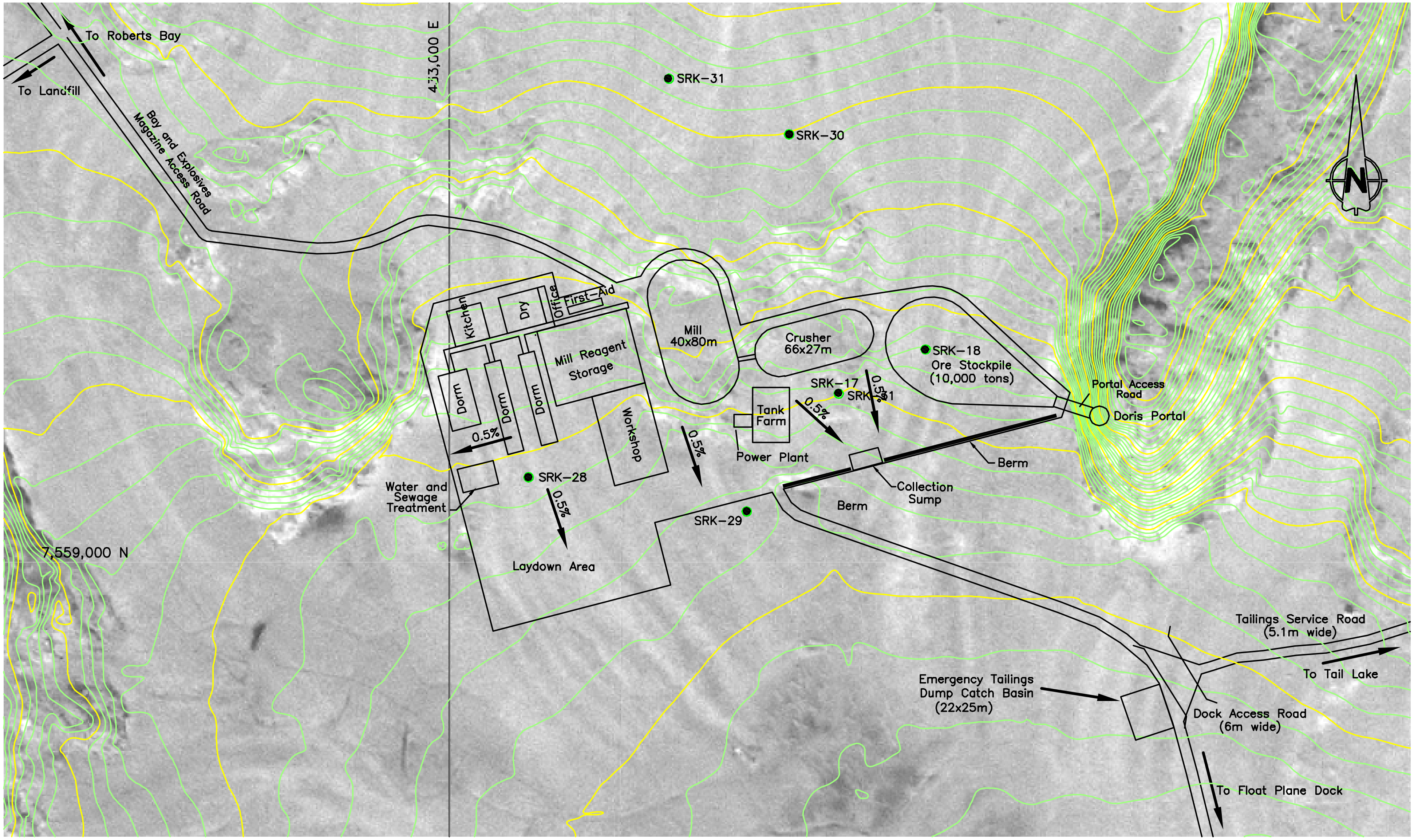
In response to DFO's information request at the time, the proponent undertook a study into the potential impacts on the Roberts Bay shoreline due to the proposed Jetty construction. This report titled "Supplementary Information on: Potential Impacts on

Shorelines Due to Construction of Jetty at Roberts Bay, Miramar Doris North Project", was prepared by Golder Associates in March 2004, and presented to NIRB in the Supplementary Information submitted by Miramar at the Technical Session under tab 4.0(b). The report concluded that "*…the overall effect of the jetty on alongshore transport in Roberts Bay is expected to be low. The site chosen is in a net deposition zone albeit at a likely slow rate and it is expected that some net deposition may occur on the west side of the jetty over time.*"

Item 4. Mill foundation conditions

As stated in Supporting Document A4 of the FEIS the preferred foundation condition for the Doris North Project mill is bedrock. Specifically for that purpose, MHBL selected an area of exposed bedrock to place the mill on, and designed the remainder of the camp/mill facilities around this zone. This mill foundation area will be prepared by creating a leveled surface area through precision rock blasting in the exposed bedrock area. Photo 1 below illustrates the outcrop in question, and the attached Figure 5.16A presents an overlay of the mill location with an aerial photograph of the site clearly indicating that the mill will be placed on the outcrop area.

Furthermore MHBL would like to confirm that all site infrastructure will be placed on suitably designed foundations. This means that all pad designs will be analyzed taking all parameters into account, including the heat generated by the buildings.



0 25 50 75 100 125 Metres

1:3000

Contour Interval = 1m

UTM Projection: NAD83 Zone 13

SRK Consulting
Engineers and Scientists

MIRAMAR HOPE BAY LIMITED

DORIS NORTH PROJECT
Surface Infrastructure Preliminary Design

Detailed Plan Layout of Mill/Camp

PROJECT NO.	DATE	APPROVED	FIGURE
1CM014.02	May. 2004	E.M.R.	5.16A

Dwg Ref: Site-Plan(Detail Mill-5.16).dwg

Item 5. Geological sections presented March 30 – April 1, 2004
The following is provided as "notes" to aid interveners in interpreting the geological sections provided at the Technical Meetings:

During the NIRB sponsored Doris North Gold Mine Technical Meetings held in Yellowknife between March 30th through April 01st, 2004, Miramar Hope Bay Limited tabled a series of geological sections of the Doris North deposit along with associated material. This material was provided in response to a previous intervener request for additional information on how the acid base accounting and humidity cell results tie into the lithology of the Doris North deposit. In response, MHBL staff provided the following geological sections created in Gemcom Software from the mine geological model:

A Plan View of the Doris North Deposit showing the trace of the proposed underground mine workings in the horizontal plane superimposed onto the surface topography at a scale of 1:1000:

A plan view of the Doris North Deposit showing the trace of the ABA sample locations in the horizontal plane superimposed onto the surface.

The following cross sections are all plotted at a scale of 1:200:

- Section 15225N ARD samples, Proposed underground development;
- Section 15225N_ARD_ALL

- Section 15250N ARD samples, Proposed underground development;
- Section 15250N_ARD_ALL;

- Section 15275N ARD samples, Proposed underground development;
- Section 15275N_ARD_ALL;

- Section 15300N ARD samples, Proposed underground development;
- Section 15300N_ARD_ALL;

- Section 15325N ARD samples, Proposed underground development;
- Section 15325N_ARD_ALL;

- Section 15350N ARD samples, Proposed underground development;
- Section 15350N_ARD_ALL;

- Section 15375N ARD samples, Proposed underground development;
- Section 15375N_ARD_ALL;

- Section 15400N ARD samples, Proposed underground development;
- Section 15400N_ARD_ALL;

- Legend for Lithology Coding used on Cross Sections
- A bedrock geology map for the entire Hope Bay Belt showing the location of the Doris North Deposit;
- An idealized geological cross section of the Doris North Deposit showing the Hinge Zone, Central Vein and Lakeshore Vein;
- A copy of the Geological Survey of Canada research paper, entitled "Geology of the Doris North gold deposits, northern Hope Bay volcanic belt, Slave Structural Province, Nunavut" by R.L. Carpenter, R.L. Sherlock, C. Quang, P. Kleespies, and R. McLeod, dated 2003.

Plan Views

The first plan view shows the outline of the proposed underground mine workings (both stopes, drifts and the access ramp) shown on a horizontal plane superimposed onto the surface topography of the site. The objective was to show the outline of the proposed mine workings and how they relate to the surface. The plan demonstrates the vein nature of the deposit and the proposed mine development along the vein system and allows the geological cross sections to be referenced on the provided grid system.

The second plan view shows the location of the ABA samples within the Doris North database on a plan view across the deposit. By aligning the grid systems on the two plan views and overlaying the two plan views, interveners are able to see the distribution of samples in relation to the proposed mine workings. The respective colors of the sample locations refer to the Neutralization Potential Ratio (ratio of neutralization potential to acid generating potential) of the ABA sample as shown in the box on the right hand side of the "Legend" plan. These are divided into three categories:

- Purple — NPR value less than 1.0 — High Acid Generating Potential
- Red — NPR Value between 1 and 3 — Uncertain Acid Generating Potential
- Green — NPR Value greater than 3.0 — Low Acid Generating Potential

The actual NPR value for each sample is shown below each sample location indicator. The letter codes above each sample locator refer to the lithological classification of each respective sample. The legend for these codes is as follows:

MV	Mafic Volcanic	
	MV_ALT	Altered Mafic Volcanic
	MV_H	Mafic Volcanic (hematite staining, trace to 1% magnetite)
	MV_D1	Mafic Volcanic (dolomite/sericite alteration: 1% Pyrite)
	MV_D2	Mafic Volcanic (dolomite/sericite alteration, >1 to 2% pyrite)
	MV_F	Mafic Volcanic (moderately to weakly foliated; >1% disseminated magnetite)
	MV_L	Mafic Volcanic (finely banded to laminated, possibly a pyroclastic, 1% pervasive calcite)
	MV_P	Mafic Volcanic (pillow flow; trace to 1% pyrite)
QV	Quartz Vein	

QV1	Quartz Veining (>1% pyrite, >5% tourmaline taken from the lakeshore vein)
QV2	Quartz Veining (<1% to rare pyrite, >1% tourmaline, taken from the lakeshore vein)
QV3	Quartz Veining (<1% pyrite, 3 to 5% tourmaline, taken from central vein)
QV4	Quartz Veining (>1% pyrite, 5% tourmaline, taken from the central vein)

MIN	Mineralized Material	
G-M	Gabbro – Massive	Coarse-grained massive Gabbro

Cross Sections

Eight cross sections through the deposit were plotted at 25 m intervals between 15225N and 15400M. Two plots were provided for each of the eight cross sections. The first plot (labeled Section_ARD_ALL) shows the plotted outline of each of the drill holes that intersect this section, the outline of the Doris Hinge Zone, the Central and Lakeshore Veins as they have been inferred from the available geological information at this section and the outline of the proposed mine workings as they appear in this vertical section through the deposit.

The colour coding and lettering along the right hand side of the diamond drill hole tracings indicates the primary lithology of the rock intersected by the diamond drilling as logged from the diamond drill core recovered. The code for the lithology lettering is as follows:

Lithology : Rock string- right

OB	Overburden
FELV	Felsic Volcanic
GAB	Gabbro
INTV	Intermediate Volcanic
MIN	Mineralized
QCV	Quartz Carbonate Vein
QFP	Quartz-Feldspar Porphyry
BSLT	Basalt
DIAB	Diabase
TUFF	Tuff
QV	Quartz Veining
MDYK	Mafic Dyke
GWY	Greywacke
BNBS	Banded Basalt
PLBS	Pillow Basalt
UM	Ultramafic
TUFI	Intermediate Tuff
TUFM	Mafic Tuff
GARG	Graphitic Argillite
MUD	Mudstone
LV	Lakeshore Vein
IV	Island Vein

CV	Central Vein
WVW	West Valley Wall Veins
STRINGER	Stringer Zone
AND	Andesite
HINGE	Hinge Zone
FTB	fault breccia
SHR	shear
FLT	fault
BR	breccia
DEF	deformation zone
FP	feldspar porphyry
POR	porphyry
DOL-QZ	dolomite-quartz
LV-MIN	lakeshore vein mineralized zone
CV2	cv2 vein
IDYK	intermediate dyke

The colour coding and lettering along the left hand side of the diamond drill hole traces indicate the degree of alteration of the dolomite where appropriate. The code for this is as follows:

Alteration: Dolomite - right

Purple	DLW	Weakly altered dolomite
Green	DLM	Moderately altered dolomite
Red	DLS	Strongly altered dolomite

The location of each of the ABA sample locations represented on this cross section are shown on the drill hole traces using the same circles as used on the plan view. In black lettering along the left hand side of each ABA sample location is the drill hole identifier number (e.g., 96TDM106). The NPR value is printed below each ABA sample while the primary lithology of the sample is printed above the ABA sample locator. The colour and lettering code for these ABA samples is the same as that provided for the plan view. The colour of the ABA sample locator refers to the NPR value range as discussed under the plan view above.

The "horseshoe or tooth like" shape of the Hinge Zone is shown on each of the cross sections. The Lakeshore Vein is on the right lower root of the "tooth". The Hinge Zone is the top or folded section of the "tooth". The Central Vein is the left root of the "tooth". The typical geological arrangement of these cross sections is shown in the Idealized Cross Section provided (copy attached). The ore that will be mined will come from the red colored quartz vein material in the Hinge Zone.

On some of the cross sections it became difficult to read the ABA drill hole information due to overlap of printed information. To offset this a second set of cross sections were printed for each of the sections. The second cross section plots labeled ARD samples, Proposed underground development turned off the drill hole and lithology information and show just the ABA sample data and the outline of the proposed underground mine workings to enable interveners to read the printed data associated with each of the ABA sample points. The two plots can be overlaid to provide the reader with a clear ability to read the contained data.

ARD Interpretation

These geological cross sections demonstrate that the material with high or uncertain acid generating potential is associated with the mineralized quartz veining or mineralized material immediately adjacent to the quartz veining. This material is typically of ore grade and will end up being processed through the mill if mined. The surrounding country rock is typically strongly non-acid generating with NPR values well in excess of 3.0. Consequently bedrock material disturbed by development mining to reach the ore zones is likely to be non-acid generating. There is some mineralized material within the strong Dolomitic sericitic alteration zone surrounding the quartz veining that has low or uncertain acid generating potential. Where this material is not taken for ore, it will be isolated and returned underground for use as backfill.

Item 6. Bedding sand sources

Supporting Document A4 of the FEIS refer to a requirement for natural sand or gravel to be used as a bedding material for placing HDPE liners for use at the Doris North Project. The document also clearly states that "*…if suitable fines cannot be sourced on site this specification will be revised to allow greater use of geotextiles.*" MHBL is not committed to using natural sand or gravel for bedding material, and could just as easily use an appropriately graded crushed rock with heavier grade geotextile for this purpose. This alternate form of liner bedding is standard practice, and therefore a completely viable alternative.

MHBL has however identified a number of potential borrow sources for material which would be suitable for use as liner bedding; however, MHBL has limited itself to only one potential borrow area, i.e. the deposit within the Tail Lake catchment, and only that portion which would ultimately be under a permanent body of water. Due to the small volume of natural sand or gravel that would be required, MHBL is not planning on opening this borrow area for this purpose alone; however, if this borrow source is opened for dam construction, this material may be considered for use as bedding material.

Item 7. Tail Lake water balance sensitivity analysis

MHBL submitted a sensitivity analysis for the Tail Lake water balance on May 11, 2004 (SRK, 2004). MHBL would however like to point out the following facts in addition to the sensitivity analysis already presented.

The mean annual open lake evaporation of 220mm was not varied throughout all the water balance sensitivity runs. In personal communication with Dr. Nathan Schmidt, P.Eng., an Associate Senior Water Resources Engineer with Golder Associates, Dr. Schmidt stated that in an advanced hydrological model, where a known precipitation input series and a corresponding series of temperature, solar radiation and relative humidity data was available, evaporation variances for different climatic years could be calculated. In the Tail Lake water balance model, since we are using a derived runoff and precipitation series, there is however no basis to support varying evaporation. The reality is that a high precipitation year could be associated with both a higher or low evaporation; however, as a rule evaporation variance tends to be small. MHBL believes that there is not sufficient factual information to justify reducing the annual evaporation numbers, and that doing so would add yet another level of conservatism to the water balance which is not substantiated.

The water balance sensitivity analysis was run using a base case of only mean annual precipitation data for all years of simulation (see Table 1 and 2 of the sensitivity analysis memorandum). The "cases" was based on varying numbers of climatic years of varying recurrence intervals, and a probability was assigned for the likelihood of each of these "cases" happening. These probabilities were however not reported correctly. Table 1 below list the corrected probabilities for each of the "cases" run in the sensitivity analysis.

The simplistic probability column refers to the probability that **exactly** the specified climatic events for each "case" happen during any ten year period. I.e. for the case where three 100-year events happen and the remaining seven years are mean annual years, the probability of this occurring is 0.01%. However, since the important parameter in the water balance sensitivity analysis is the total volume of stored water, a more realistic way of looking at probability is to look at the total volume of precipitation that can occur over a 10-year period. This probability has been determined by assuming a normal distribution of decadal precipitation events, and calculating how much each simulated case varies in accordance with the assumed standard deviation in the curve. To develop this decadal distribution curve we used the long-term climate data for Cambridge Bay, and thus calculated the probabilities as listed in the last column of Table 1. Thus, the most realistic probability of receiving the total volume of water associated with three 100-year events and seven mean annual years over a ten year period is 3%. Although this calculation of probability is the most realistic, it should be borne in mind that since the time it takes Tail Lake to reach full supply level of 33.5m is less than ten years these most realistic probabilities are still conservative.

Table 1: Corrected probabilities for the Tail Lake water balance sensitivity analysis.

Case	Probability (as stated erroneously in SRK, 2004)	Probability (Calculated Simplistically)	Probability (Most Realistic Calculation)
Base	1:1	50%	50%
1 x 10-yr	1:10	39%	39%
1 x 50-yr	1:50	17%	30%
2 x 10-yr	1:100	19%	29%
1 x 100-yr	1:100	9.1%	27%
3 x 10-yr	1:1,000	5.7%	20%
2 x 50-yr	1:2,500	1.5%	15%
2 x 100-yr	1:10,000	0.42%	11%
4 x 10-yr	1:10,000	1.1%	13%

Case	Probability (as stated erroneously in SRK, 2004)	Probability (Calculated Simplistically)	Probability (Most Realistic Calculation)
1 x 100-yr; 1 x 50-yr; 1 x 10-yr	1:50,000	0.59%	8%
5 x 10-yr	1:100,000	0.15%	8%
3 x 50-yr	1:125,000	0.08%	6%
1 x 100-yr; 1 x 50-yr; 2 x 10-yr	1:500,000	0.30%	5%
3 x 100-yr	1:1,000,000	0.01%	3%
6 x 10-yr	1:1,000,000	0.014%	5%
1 x 100-yr; 2 x 50-yr; 1 x 10-yr	1:2,500,000	0.087%	3%
1 x 100-yr; 1 x 50-yr; 3 x 10-yr	1:5,000,000	0.054%	3%
4 x 50-yr	1:6,250,000	0.003%	2%

Item 8. Managing water balance uncertainties

MHBL submitted a sensitivity analysis for the Tail Lake water balance to NIRB on May 11, 2004 (SRK, 2004).

Item 9. Tail Lake discharge contingency measures

A sensitivity analysis (SRK, 2004) has been completed for the revised site runoff conditions suggested by EC. In that analysis it is shown that even for extreme wet conditions the storage capacity for the two year project is at least six years, even if no discharge occurs within the entire operational and storage period. It is also shown water quality is likely to improve with time through natural degradation and mixing within Tail Lake so that it would meet MMER discharge criteria.

However, in the event that treatment would be required, it is anticipated that a lead time of approximately three years would be required to design and construct a suitable treatment plant. From a water management timeline perspective, therefore, the water filling rate would be established and projected into the future. At the time that the facility is shown to flood within the following three years, the water quality would be projected three years in advance based on observed changes in the preceding years. If it is established that water treatment will be required, design of an appropriate water treatment plant would be commenced.

The water treatment process design would be specific to the requirements for discharge once the contaminant(s) of concern have been identified. While it is not possible at present to recommend a specific treatment strategy, Table 2 below provides a summary of potential water treatment strategies that may be adopted for some of the potential contaminants. The table also provides an indication of the water quality that may be achieved by the treatment process.

Table 2: Possible water treatment methods for potential contaminants.

Contaminant	Process	Treated Effluent (mg/L)
Suspended Solids	Flocculent / settling pond	< 10
Ammonia	Alkaline Chlorination	< 2
Nitrite	Chlorination	< 0.05
Aluminium	Hydroxide precipitation	< 0.1
Arsenic	Ferric Co-precipitation	< 0.05
Cadmium	Hydroxide / Sulphide Precipitation	<0.005
Copper	Hydroxide / Sulphide Precipitation	~0.003
Iron	Hydroxide precipitation	< 0.1

Reference:

SRK Consulting (Canada) Inc. (2004). Tail Lake water balance sensitivity analysis. Technical Memorandum to Miramar Hope Bay Limited, dated May 10, 2004.

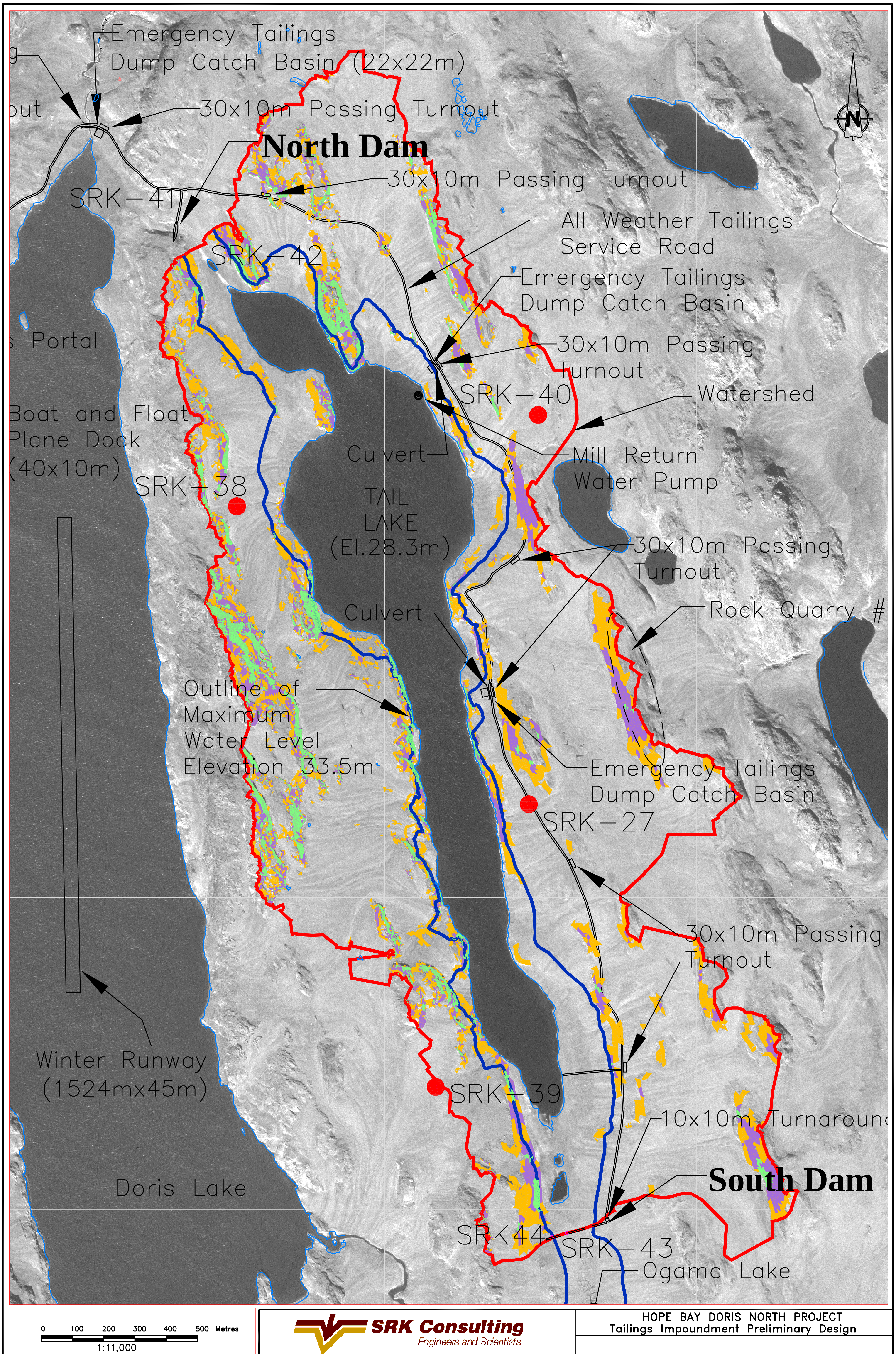
Item 10 – Tail Lake Perimeter Stability

The Thurber Engineering report included in Supplementary Document A5 of the FEIS does in fact include an interpretation of the stability of slopes, where they are associated with soil mass movements (i.e. flows, slides and falls). We have confirmed with the author of the report, Mr. R. Gerath, P.Geo., who is an expert in surficial geology mapping in the arctic, that the absence of any mention or mapping of surficial features specifically in the Tail Lake catchment associated with mass movements, such as solufluction, skin flows, slumps, earth slides etc. are due to the fact that there are no such features present. This fact was also mentioned in MHBL's letter to NIRB dated April 29, 2004 (Item 7, page 18-21).

Mr. Gerath further mentioned that for large dams, a full supply level contour based surficial geology study is sometimes undertaken, which specifically targets the area that would be impacted by the raising water level. In the case of Tail Lake, such a detailed study would not change the outcome with regard to the presence of soil mass movements; however, the study would assist in exactly identifying which portions of the perimeter consist of bedrock, sand, silt and/or marine clay. Such a detailed study can then be linked to average slope angles and a qualitative assessment of the zones that would be more susceptible to soil mass movements could be made. MHBL will undertake such a detailed study before proceeding to the detailed engineering design stage of the Doris North Project; however, MHBL believes that the mitigative approach presented in their April 29, 2004 letter is consistent with standard best practice.

Andersland & Ladanyi (2004) state that in order to minimise the risk of inducing any soil mass movements in permafrost very flat surfaces should be specified (1H:3V or flatter). The attached Figure 1.3A presents a plan view of the Tail Lake catchment area, overlaid on an aerial photograph of the site. The final full supply water level of 33.5m in Tail Lake is shown on the plan together with three different shadings representing slope angles within the catchment. Any sections within the catchment with slope angles steeper than 6^o (1H9.5V) are shaded in yellow; slopes steeper than 11^o (1H:5.1V) are shaded in purple and slopes steeper than 18^o (1H:3.1V) are shaded in green. Although the raising water level in Tail Lake does not constitute a cut slope, this figure does illustrate that the steep slopes in the catchment are bedrock dominated, and that the permafrost soils are generally flatter than 6^o, which substantially reduces the risk of soil mass movements, especially within the area impacted by Tail Lake.

Reference:
Andersland, O.B., Ladanyi, B. (2004). Frozen Ground Engineering, Second Edition. John Wiley & Sons.



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HOPE BAY DORIS NORTH PROJECT
Tailings Impoundment Preliminary Design

Tail Lake Shoreline Slopes

PROJECT NO.	DATE	APPROVED	FIGURE
1CM014.02	May 2004	E.M.R.	1.3A

Item 11. Fines Borrow Location

The preliminary dam design expects to use fine grained soils for the core material which will be constructed in winter to create a frozen core. The fine grained material will likely be harvested from the marine sediments in the borrow source (currently envisaged) located in the flooded terrace immediately upstream of the North Dam as indicated in MHBL's April 29, 2004 letter to NIRB (page 21-24). The proposed location for the borrow source is based on inferred information from all the drill holes drilled in the Tail Lake basin which included four drill holes (SRK-7, SRK-8, SRK-9 and SRK-42), as well as nine shallow hand dug test pits/auger holes, specifically in the target borrow source area (these are depicted in Figure 3.1 in Supporting Document A5 of the FEIS). These borrow samples were subjected to laboratory testing which included moisture content, grain size distribution, Atterberg limits, salinity and Proctor compaction. All these results have been documented in Supporting document A5 of the FEIS.

MHBL is confident that the proposed borrow source location will yield the desired materials based on the existing level of information for the preliminary design; however, MHBL has also stated that additional site characterization of the borrow deposit including additional material property testing will be conducted as part of the final detailed design.

MHBL has also committed to limiting the location of the borrow source to within the footprint of Tail Lake, which is based on the long-term water elevation of 29.5m. The purpose of this self-imposed restriction is to prevent any additional disturbance area that would normally be caused by the development of a borrow area.

If, in the unlikely event, based on additional site characterization of the proposed borrow source area, it is evident that either insufficient or inadequate material is available, the proposed dam design will be modified to suit the circumstances. It is important to note that the main criterion of the dam design is not to build a frozen core dam using fines in the form of natural soils, but to build a water-retaining structure. As illustrated in Supporting document A5 of the FEIS, there are suitable alternative designs that can be incorporated if necessary to achieve the same goal.

Item 12. Tail Lake spillway

The proposed spillway is to be constructed in the north abutment of the North dam. MHBL has not done any site characterization of this area, other than the surficial geology study and site inspections by the design engineers. From this basic information, it is expected that bedrock is less than 4m below ground in the proposed spillway area (inferred from the closest available borehole, SRK-13), and therefore a spillway excavated into bedrock has been assumed to be feasible. MHBL will be conducting the necessary geotechnical investigations to confirm the foundation conditions in the spillway area prior to completing the detailed design, and will adopt the appropriate measures to ensure a functional design.

Item 13. Tail Lake freeboard

MHBL acknowledges INAC's comments with respect to the definition of freeboard for the dams. MHBL will ensure that the core height, and associated thermal protection is designed using the maximum water level associated with the design flood condition. This will be done during the final design stage.

Item 14. Dam construction details

MHBL interprets INAC's request for more details on Nuna Logistics frozen core dam construction experience as a concern about the constructability of the proposed dams for the Doris North Project. MHBL would like to address this concern by informing NIRB that MHBL recently requested submissions from three independent northern earthworks contractors to construct the proposed dams as per the preliminary design. All three contractors were confidant that the dams could be constructed, and each was prepared to back those statements by submitting formal tender documents. MHBL is therefore confidant that the dams are constructible.

Furthermore, MHBL would like to point out that the preliminary dam design presented in the FEIS has been reviewed and endorsed by Dr. Jean-Marie Konrad from the Université Laval, Québec, a leading frost-heave and permafrost engineer. Dr. Konrad will continue to provide technical review throughout the detailed design phase of the project.

Item 15. Residual effects at other projects

Mitigation measures presented in the FEIS and related information includes practices based on industry experience at Lupin, Ekati, and exploration camps in Nunavut and the Northwest Territories. MHBL will continue its ongoing liaison with other northern mining olperations and adapt mitigation measures at Doris North in response to advances in mitigation effectiveness at other northern mining locations especially as these apply to revegetation of disturbed terrain with endemic species.

Item 16. Bathurst caribou herd

The GNWT deployed collars on female caribou in the Snap Lake Project area in the late winter of 2001. It was assumed that being on the traditional winter range of the Bathurst caribou herd that the caribou in the area were of the Bathurst herd. Most of the animals collared in the area of the Snap Lake project migrated to the Bathurst calving ground in June 2001 but a few migrated to the area north of McAlpine Lake and the Queen Maude Gulf Bird Sanctuary. The spring migration pattern of 2001 for these caribou cows was repeated in 2002 as documented in Appendix 5 FEIS Supporting Document D2.

The current interpretation of these data is that the winter ranges of the Bathurst and Ahiak (Queen Maud Gulf herd) herds partially overlap. Observations from surveys over the Hope Bay belt as reported in SD D2 and the Doris North FEIS is that the spring and summer ranges of the Ahiak herd includes the Hope Bay belt. Survey data show that there is a decreasing spring caribou density on the belt to the north with no observation of caribou with calves in the Project LSA. Summer / fall densities have generally been very low (less than 1 animal / sq. km). While the western margins of the Ahiak herd's annual range probably includes the Hope Bay greenstone belt, there is no evidence that it includes its northern reaches in the area of the Doris North Project. Ongoing surveys as planned for 2004 will add information on this question.

MHBL holds the view that the current / recent distribution of the Bathurst caribou herd does not include the Doris North Project area.

MHBL will implement a conservative mitigation plan that assumes caribou to be in the Project area in all seasons of the year and will be ready to adapt activities on site accordingly.

Item 17. Victoria Island caribou herd

The cumulative effects analysis for the Doris North Project assessed those industrial projects referred to MHBL by NIRB. It demonstrated (FEIS Table 5.2) that the Victoria Island caribou herd would not interact with existing mining operations on the Slave Geological Province. The Ulu Project (future potential) and Bathurst Port/Road Project (future potential) may be on the margins of the Victoria Island caribou herd's winter range.

The FEIS reviewed the historic population fluctuations of caribou herds in Alaska, Yukon, and NWT whose ranges included industrial activities and transportation corridors over the last 20 + years. No caribou population declines have been documented that are attributable to resource development and/or production activities.

In the case of the Victoria Island, there may be a high risk of cumulative effects from industrial land use on its mainland winter range like the Doris North if the project were to result in incremental harvest by project workers. This is not the case, hunting by project workers will be prohibited and so incremental harvesting from the Victoria Island herd at Doris North will not be a source of cumulative effect on the Victoria Island herd.

INAC raised the issue of the conservation status of the Victoria Island herd (historically also referred to as the Dolphin and Union Herd) with reference to the "…Peary herd, which is threatened." Unfortunately INAC did not offer any documentation that describes the "Peary herd". Also, COSEWIC has recently reviewed the status of Peary caribou in Canada and removed the Dolphin and Union (Victoria Island) herd from a common designation with Peary caribou. There is presently no COSEWIC conservation designation for the Dolphin and Union barren-ground caribou herd (www.cosewic.gc.ca/pdf/English/Detailed_Species_Assessment).

Item 18. FEIS Table 5.2: Regional cumulative effects

FEIS Table 5.2: Potential Interactions and Measurable Regional Cumulative Effects presents 2 aspects of the Doris North cumulative effects assessment The first aspect (in the first table) summarizes the interactions (or lack thereof) of all project with significant elements of the Doris North Project local project area (ie. Land, water, transportation, wildlife). The second table, *FEIS Table 5.2: Potential Interactions and Measurable*

Regional Cumulative Effects (continued), asks the question: "Does the Doris North Project have a Cumulative Effect on the VEC's for these Projects?

These examinations show that the "other" projects do not pose potential cumulative effects on the Doris North project area (first table); and that the Doris North Project does not pose a potential cumulative effect on VEC's in the project area of the "other " projects (second table).

Item 19. Crime / mitigation

All projects that inject money into the communities run a risk that some of that money could be used to buy drugs and alcohol which may lead to an increase in crime. Mitigation methods to reduce this risk include money management courses, substance abuse prevention and awareness programs, personal counseling and controlling the flow of drugs and alcohol entering the community.

Item 20. Social – economic effects monitoring

Monitoring is useful to identify impacts that require mitigation. Monitoring does not, in itself, mitigate impacts. Supporting Document E3 lists the following indicators proposed by the Nunavut Planning Commission after several years of study on monitoring:

- unemployment rates
- education levels for the Kitikmeot
- number of private dwellings in the Kitikmeot
- housing characteristics for the Kitikmeot
- population changes in the Kitikmeot
- age distribution
- highest level of schooling
- births and deaths
- number of persons per private dwelling
- smoking in the Kitikmeot.

Item 21. Social – economic effects mitigation

In Kugluktuk's Interim Community Submission to NIRB for the Jericho Diamond Mine Project (http://nirb.nunavut.ca/English/NIRB Opening Page.htm) figures are provided by the RCMP corporal on the increased consumption of alcohol during his first year in the community and the concurrent increase in criminal charges. The submission also includes suggestions for mitigation, many of which are referred to in Supporting Document E3). The efforts to mitigate these impacts may differ from community to community in the Region and as a result the residual impacts may range from moderately positive to moderately negative

Specific mitigation actions by Miramar Hope Bay Ltd. are the subject of discussions with the Kitikmeot Inuit Association.

Item 22. Worker rotation and community health

The impacts relating to a rotational schedule will depend on the success of the mitigation methods employed. Supporting Document E3 contains suggestions for mitigation. The efforts to mitigate these impacts may differ from community to community in the Region and as a result the residual impacts may range from moderately positive to moderately negative

Specific mitigation actions by Miramar Hope Bay Ltd. are the subject of discussions with the Kitikmeot Inuit Association through the IIBA process.

Item 23. Disposable income / crime

Kugluktuk's submission to the Tahera Review (see 21 above) clearly documents a relationship between an increase in disposable income to an increase in the quantity of store-bought alcohol to an increase in crime. It is the consultants view that the probability of there being a similar relationship as a result of the Doris North Project is moderate (between 1% and 50%), that the impact frequently (more than twice during the Project's life), that the magnitude will be moderate (less than 10% change from baseline conditions), that the impact will occur year-round, that many of the Kitikmeot communities will be impacted if they supply employees to the Doris North Project, that the impact will be over a medium term (one to three years) because that is the length of the project, that the impacts are reversible as the jobs will disappear at the end of the project and that the impacts will be moderately negative because they will be clearly distinguishable and result in an elevated awareness and concern among stakeholders.

Items 24, 25 and 26. Social – economic indicators, monitoring, mitigation and monitoring committee.

Miramar Hope Bay Ltd. and the Kitikmeot Inuit Association are negotiating an Inuit Impact and Benefit Agreement. Until these negotiations are complete Miramar Hope Bay Ltd. will not be making any further comments concerning mitigation and monitoring.