



NUNAVUT WATER BOARD

REASONS FOR DECISION INCLUDING RECORD OF PROCEEDINGS

In the Matter of:

Applicant: Miramar Hope Bay Ltd.

Subject: Application for Type “A” Water Licence

Date: September 19, 2007

Precedence: Where there is any inconsistency or conflict between the *Nunavut Land Claims Agreement* and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act (NWNSTRA)*, the Agreement prevails to the extent of the inconsistency or conflict. Where there is any inconsistency or conflict between the *NWNSTRA* and any other *Act* of Parliament, except the *Nunavut Land Claims Agreement Act*, the *NWNSTRA* prevails to the extent of the inconsistency or conflict.

RECORD OF PROCEEDINGS

Applicant: Miramar Hope Bay Ltd.

Address: 300 - 889 Harbourside Drive, North Vancouver, B.C. V7P 3S1

Purpose: Application for Type "A" Water Licence for the Doris Gold Mine

Application Received: May 9, 2007

Date(s) of Hearing: Day 1: August 13, 2007
Day 2: August 14, 2007

Members Present: Thomas Kabloona, A/Chair
George Porter, Member
Guy Kakkiarniun, Member
Geoff Kusugak, Vice-Chair
Lootie Toomasie, Member
Robert Hanson, Member

Board Staff: A/Executive Director
Director Technical Services
Manager of Licensing
Licence Trainee
Technical Advisor
Hearing Coordinator
Executive Assistant
Administrative Clerk
Board Secretary
Technical Advisor with NIRB
Hatch Limited
Tunaley, Lines and Associates
D. Filiatrault, P. Eng.
D. Hohnstein, C.E.T
P. Beaulieu
R. Dwyer
D. Bhandari, M. Eng.
D. Carr, B.Sc.
S. Kamookak
D. Porter
B. Kogvik
L. Wan
R. Halim
K. Tunaley
S. Lines

Interpreter(s): Inuktitut
• M. Hunt A. Hadlari
Inunniagtun
• J. Otakiak, E. Elias

NWB Legal Counsel: W.A. Tilleman, C. Emrick

Court Reporter: K. Schumann, CSR(A)

Sound Technician: K. Balsillie, Pido Productions

Applicant: Miramar Hope Bay Limited (MHBL or Miramar)
• J. Currie, Vice President of Operations
• L. Connell, General Manager of Environment

- T. Maloof, Manager of Permitting and Compliance
- A. Buchan, Manager of Community Relations
- K. McIvor, Tenure and Permitting Coordinator

MHBL Consultants

- M. Rykaart, SRK Consulting Ltd.
- J. Chapman, SRK Consulting Ltd.
- N. Schmidt, Golder Associates
- G. Ash, Golder Associates
- D. Valiela, Lawson Lundell LLP

Parties:

Indian and Northern Affairs Canada (INAC)

- C. McLean, Director of Operations, Nunavut
- J. Rodgers, Manager Water Resources
- D. Abernathy, Water Resources Coordinator
- B. Pedersen, Resource Management Officer
- M. O'Hearn, Manager of Communications

INAC Consultants

- K.Landa, Legal Advisor
- H. Hartmaier, BGC Engineering Inc.
- J. Brodie, Brodie Consulting Ltd.
- E. Yaremko, Northwest Hydraulic Consultants
- L. Barazzuol, MESH Environmental Inc.
- L. Gomm, Gartner Lee Ltd.

Nunavut Tungavik Incorporated (NTI)

- G. Hakongak, Senior Advisor, Environment, Water and Marine Management for Department of Lands and Resources

Kitikmeot Inuit Association (KIA)

- D. Havioyak, President KIA
- G. Clark, Director of Lands, Environment and Resources
- K. Tweedle, Environment Technician
- S. Anablak, Senior Lands Officer
- A. Perterson, Summer Student
- J. Donihee, Counsel

KIA/NTI Consultant

- Dr. M. McGurk, Rescan Environmental Services Ltd.

Environment Canada (EC)

- A. Wilson, Water Pollution Specialist
- G. Groskopf, Mining Issue Specialist
- S. Levenson, Environmental Assessment Specialist EPOD
- D. Fox, Air Issue Specialist

Department of Fisheries and Oceans Canada (DFO)

- T. Gordanier, Environmental Assessment and Major Projects
- P. Savoie, Fish Habitat Management Biologist
- A. Lui, Senior Habitat Biologist

Government of Nunavut – Department of the Environment (GN-DOE):

- M. Atkinson, Manager Environmental Assessment and Land Use

BACKGROUND AND REGULATORY HISTORY

Miramar Hope Bay Ltd (MHBL or Miramar) proposes to construct, operate and reclaim a small underground gold mine with an average throughput of 720 tonnes per day and a two year mine life. The Doris North Project (Project) is located predominately on Inuit Owned Lands (IOL) on the mainland of the West Kitikmeot region of Nunavut, approximately 125 km southwest of Cambridge Bay and 75 km northeast of Umingmaktok.

According to current mine reserves, the mine will produce approximately 311,000 ounces of gold from 460,000 tonnes of ore. Processing of the ore will occur on site, with the gold being shipped off site by air in the form of Dore bullion bars to a commercial refiner. The project will be self-sufficient, and will have a footprint of approximately 54 hectares.

The site is remote and there are no permanent or winter roads that link it to any neighboring communities or facilities. Currently, there is no infrastructure development on the site, with the exception of an exploration camp on the east shore of Windy Lake, located approximately 10 km southwest of the project site.

The primary access route to the project for fuel, equipment and supplies will be via the Arctic Ocean using sealift barges from Hay River and by charter aircraft for employees, contractors and food. The proposed mill site is located approximately 5 km from Roberts Bay, which is accessible by ships and barges for a short ice-free shipping season each summer. A jetty will be constructed in Roberts Bay as a landing facility for the sealift barges. Equipment will be offloaded and stored in a lay down area close to the shore. Annual fuel supply will be trucked from the sealift vessels to a tank farm constructed at the plant site. Bulk storage of fuel is proposed for a quarry located at Roberts Bay.

A 4.8 km all-weather road, constructed using various culverts and rock drains, will link the Roberts Bay sealift landing site with the mine site, allowing year-round haulage of supplies from the sealift landing site laydown area. The mill, crushing plant, fuel storage tank farm, camp, office complex, workshops, power generation plant, sewage treatment plant and all other operational mine infrastructure will be located in a central location adjacent to the underground mine adit.

An all-weather airstrip, suitable for small aircraft, will be constructed along the alignment of the main road between the plant site and Roberts Bay. During summer months the site will also be serviced by float planes. This dock will be linked to the mill site with an all-weather road. During winter months, an airstrip capable of handling larger aircraft will be constructed on the ice on Doris Lake, and the site serviced from this airstrip.

Tailings produced during the milling process will be deposited in Tail Lake about 5 km from the proposed mill location. Tailings deposition will be sub-aqueous, requiring the construction of two water retaining structures: the North and South Dams. The tailings will be contained in Tail Lake by constructing a low permeability frozen core dam across

the outlet of Tail Lake to the north, and by a similar second dam constructed across a topographic low point at the south end of the lake. Mill tailings will be treated in a water treatment plant within the mill to destroy residual cyanide and precipitate heavy metals before the tailings are discharged into Tail Lake. The water in Tail Lake is planned to be discharged annually to Doris Creek.

MHBL proposes one year for construction, two years operation, three years closure and three years post closure monitoring. MHBL is continuing its exploration of the Hope Bay greenstone belt in the region of the Doris North Project. This could potentially extend the life of the Project or lead to development of other gold mines in this area.

A construction workforce peaking at 120 will be required to carry out construction. During operations, milling and processing will need a total workforce of 24, while maintenance support, catering, supervision and administration will require a total workforce of 81. Of the total operating workforce, it is expected that half would be on site at any given time.

Impact Review

On March 1, 2002, Miramar, known as Hope Bay Joint Venture at the time, submitted a project description for the then entitled Doris Hinge Project and later renamed Doris North Gold Project to the Nunavut Impact Review Board (NIRB). The project proposal was referred to a Part 5 Review by the Minister of Indian and Northern Affairs Canada (INAC) following a NIRB 12.4.4(b) Screening Decision. A Final Hearing was held from July 11 to 16, 2004, following which NIRB considered the evidence available to it and decided that it could not approve the Project. On December 6, 2004, the Minister of INAC accepted NIRB's report and the recommendation of not approving the Project.

MHBL submitted an Updated Preliminary Project Description to NIRB on February 14, 2005. After an abbreviated screening process, NIRB again issued a Screening Decision of 12.4.4(b) stating that the Project required a review under Part 5 or 6 of Article 12 of the *Nunavut Land Claims Agreement* (NLCA). The Minister agreed and referred the Project to a second Part 5 Review by NIRB. The Final Hearing was held in Cambridge Bay from January 30 to February 3, 2006. On March 6, 2006, NIRB submitted its report and recommendation to the Minister, recommending that the Project proceed to the regulatory stage subject to certain terms and conditions. An addendum to Condition 1 was issued by NIRB on June 22, 2006. On July 28, 2006, pursuant to section 12.5.7(a) of the NLCA, the Minister accepted NIRB's recommendation that the Project should proceed.

On September 15, 2006, the NIRB Project Certificate was released pursuant to s. 12.5.5 of the NLCA.¹

¹ Project Certificate NIRB No. 003 – issued to Miramar Mining on September 15, 2007 by Elizabeth Copland, A/Chairperson NIRB.

Regulatory History

In March 2002 Miramar submitted a Water License Application Form and Supplementary Questionnaire to the Nunavut Water Board (NWB or Board). MHLB updated the submission in February of 2005.

Following issuance of the NIRB Project Certificate, the NWB requested input from interested parties to prepare Guidelines for the Applicant. Following consultation with interested parties, on October 30, 2006, the NWB issued Preliminary Guidelines for the filing of an application for a water licence for the Doris North Gold Project.²

On November 7, 2006, MHLB filed a Water License Application Support Document for the Project. Following a technical review of the submission and after an evaluation of the application materials and Intervener comments the NWB determined that the Application was incomplete and require a full application resubmission.³ On December 27, 2006, the NWB provided Miramar with additional Guidelines for the Doris North Water Licence Application

On April 30, 2007, MHLB filed a Revised Water Licence Application Support Document for the Project to supersede and fully replace the previously filed document.⁴ On May 9, 2007, the Board issued a Notice of Application and a Notice of Public Hearing to be held on August 13, 2007, in Cambridge Bay,⁵ and forwarded the Application to interested parties to begin a detailed technical review of the application.⁶ On June 8, 2007, Miramar advised the NWB of a series of proposed modifications to the Project.⁷

The NWB held a technical meeting and a pre-hearing conference on June 11 and 12, 2007, in Cambridge Bay.⁸ At the technical meeting the parties provided MHLB with their information requirements for these changes and MHLB committed to providing the required information.

² NWB Guidelines to the Applicant issued October 2006 in accordance with section 13.8.1 of the NLCA and section 48(3) of the *Nunavut Waters Nunavut Surface Rights Tribunal Act* (NWNSRTA).

³ Letter to Larry Connell, General Manager of Environment, Miramar Mining Corporation, from J. Murdock, NWB, dated December 26, 2006.

⁴ Miramar Hope Bay Ltd. Revised Water Licence Application Support Document Doris North Project, Nunavut, April 2007, and redline version received by the NWB on May 4, 2007. In meeting the requirements of the Board's December 27, 2006, letter to the applicant the Board acknowledges MHLB's effort to provide a "pants that fit application".

⁵ Formal notice was issued pursuant to section 55(2) of the NWNSRTA.

⁶ Letter to Larry Connell, General Manager Environment, Miramar Mining Corporation, Re: Acknowledgement of resubmission of Application for Type "A" Water Licence for Doris North Project, from Dionne Filiatrault, Acting Executive Director, NWB, dated May 9, 2007.

⁷ Letter to Phyllis Beaulieu, Manager of Licensing, NWB, Re: Doris North Water License Application – Project Modifications Arising from Ongoing Detailed Engineering, From Larry Connell, General Manager Environment, Miramar, dated June 8, 2007.

⁸ Notice of pre-hearing, Technical Meeting and Final Public hearing provided in Letter to Larry Connell, General Manager Environment, Miramar Mining Corporation, Re: Acknowledgement of resubmission of Application for Type "A" Water Licence for Doris North Project, from Dionne Filiatrault, Acting Executive Director, NWB, dated May 9, 2007.

On June 21, 2007, the NWB advised NIRB of the proposed modification and requested NIRB make a determination as to whether or not these proposed modifications required screening pursuant to section 12.4.3 NLCA.⁹ On July 18, 2007, NIRB notified the NWB that section 12.4.3 of the NLCA applied to the modifications proposed by MHL, and as such, those modifications are exempt from further screening.¹⁰

In its Pre-hearing Decision,¹¹ the NWB set out that the issues presented to the Board at the Final Hearing are to be generally classified under the following categories:

1. Nunavut Impact Review Board Schedule 12.4.3 Determination;
2. Term of licence;
3. Type and amount of security;
4. Compensation Agreements;
5. Construction;
6. Water use;
7. Water management/Water Quality;
8. Waste management;
9. Geochemistry
10. Tailings Containment area;
11. Contingency planning;
12. Monitoring;
13. Closure and reclamation;
14. Recommendations for the Roberts Bay Jetty to departments or agencies of the Government of Canada or the Government of Nunavut; and
15. Other issues

Further, in consideration of several time constraints and following consultation with parties at the pre-hearing, the NWB decided to vary its rules by requesting that parties submit written interventions for the Final Hearing no later than July 30, 2007. Written interventions were received from the Kitikmeot Inuit Association (KIA), Nunavut Tunngavik Incorporated (NTI), INAC, Environment Canada (EC), Department of Fisheries and Oceans Canada (DFO) and Government of Nunavut – Department of the Environment (GN-DOE). The Final Hearing was held on August 13 and 14, 2007, in Cambridge Bay.

At the close of the Final Hearing, the Board left the record open for MHL to provide a written response to Exhibit 24: Package of Written Replies to Exhibit 5,¹² and for the parties, and in particular MHL, KIA and INAC, to make additional submissions on the

⁹ Letter to Leslie Payette, Manager, Environmental Administration, NIRB, Re: Doris North Gold Mine – Proposed Modifications to the Project Proposal, from Dionne Filiatrault, Acting Executive Director, NWB, dated June 8, 2007.

¹⁰ Letter to Thomas Kabloona, Acting Chair, NWB, Re: Exempt from Screening – Project Modifications Arising from Ongoing Detailed Engineering Associated with the Doris North Gold Mine Project from Stephanie Briscoe, Executive Director, NIRB, dated July 18, 2007, at p. 3.

¹¹ Letter to Doris North Distribution List, Subject: Pre-Hearing Conference for Miramar Hope Bay Ltd. Doris North Project application for a Type A Water License., from Dionne Filiatrault, Acting Executive Director, NWB, dated June 21, 2007.

¹² Nunavut Water Board Hearing Re: Doris North Project, Transcript, August 14, 2007, at p. 475.

form and nature of the security, any conditions on security, and legal issues relating to security.¹³ On August 24, 2007, MHBL provided a written response to Exhibit 24: Package of Written Replies to Exhibit 5 and a supplemental submission on the matter of security. KIA and INAC also provided supplemental written submissions on the matter of security. On August 28, 2007, the Board notified the Distribution List of the receipt of the supplemental information on security and provided the parties with an opportunity to respond to these submissions. KIA submitted a reply response on September 4, 2007.

In addition to the water license, several other key permits are required for the Doris North Project, including: KIA land leases; INAC for a foreshore lease for the Roberts Bay jetty; the DFO and EC for required authorizations under the *Fisheries Act* and for amendment of the *Metal Mining Effluent Regulation* (MMER) to include Tail Lake on Schedule 2; Natural Resources Canada (NRCan) for explosives storage and use permits; Transport Canada (TC) on various project related permits and authorizations, and Nunavut Tunngavik Incorporated (NTI) to finalize a Production Lease Agreement.

Summary of Final Hearing Submissions of the Parties

Nunavut Tunngavik Incorporated and Kitikmeot Inuit Association

NTI and KIA participated jointly in the review of the Project. KIA is the representative of Kitikmeot Inuit and the Designated Inuit Organization (DIO) for purposes of Article 20 of the NLCA. KIA is the owner and has water rights and management authorities of the IOL.

In response to INAC's rejection of joint payees for reclamation security, KIA submitted that the NWB should order water related security payable under the water licence such that the Crown will hold security for its lands through the Crown lease and KIA will hold the security it requires through its surface lease. In order to meet its priority of protecting Inuit interests, KIA advised that it intends to hold \$11.7 million in security via the land lease with MHBL despite that fact that such an approach may cause the proponent to be "doubled bonded." KIA submitted it has attempted to resolve the issue of dividing reclamation security with INAC for years and requests the attention of the NWB and INAC for resolution of the issue.

KIA submitted that the term of the water licence should be 5 years in order to provide the Board with an opportunity to review the water quality monitoring data and the overall success of water and waste management at Doris North before MHBL is allowed to walk away from the site. KIA and NTI made recommendations with respect to frequent monitoring and reporting of the water quality and the overall water management model.

Indian and Northern Affairs Canada

INAC's participation in the review of Miramar's Application is derived from the *Department of Indian and Northern Affairs Act*, the NLCA, *Territorial Lands Act and Regulations*, the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*

¹³ Nunavut Water Board Hearings Re: Doris North Project, Hearing Transcript August 14, 2007, at p. 475.

(NWNSRTA), as well as the mine site reclamation policy for Nunavut. INAC's review focused on those issues within its mandate, including surface and permafrost disturbance, water quality and quantity assessment, waste management, and abandonment and reclamation cost estimates.

INAC recommended total reclamation liability be set at \$12.3 million, with an allocation of \$6.2 million for land-related liability costs to be held by KIA and \$6.1 million for water-related liability to be held by the Crown pursuant to the water licence. INAC recommended that these estimates be reviewed in 6 months and in 18 months after commencement of mining operations. INAC submitted that the "double bonding" issue cannot be resolved by the Board or by INAC and must be resolved between Miramar and KIA.

INAC made detailed recommendations regarding monitoring the geotechnical and the permafrost stability of project structures, monitoring of the water balance and water quality model, geochemical monitoring, waste rock management, and the development of the closure and reclamation plan and related conditions.

Environment Canada

EC submitted comments on issues related to environmental effects on or related to aquatic quality, including on air quality to the extent it may affect water quality. EC made recommendations regarding water quality with respect to mine effluent discharges, plus aquatic effects monitoring and waste disposal and air emissions.

Department of Fisheries and Oceans Canada

The DFO participated in the review of the Project pursuant to its authority under the *Fisheries Act*. The DFO recommended additional detail and schedules for the "no-net-loss" plan, and advised the Board that the DFO will obtain financial securities to cover the jetty portion of the project and will require security for fish habitat compensation and the addition of Tail Lake to Schedule 2 of the MMER.

Government of Nunavut – Department of the Environment

The GN-DOE reviewed the application under its authority to control the discharge of contaminants and their impact on the environment under the *Environmental Protection Act* and its authority under the *Wildlife Act*. GN-DOE supported MHBL's request for an 8-year term of the licence and made recommendations relating to the incorporation of construction commitments into the monitoring and follow up plan, treating potable water using the Canadian Water Quality Guidelines, and ensuring that emissions from incinerators comply with Canada-Wide standards for Dioxins, Furans and Mercury. Additionally, GN-DOE made recommendations regarding geochemistry monitoring, updating contingency plans annually, and the lack of detail in the closure and reclamation plan. GN-DOE recommended that a detailed reclamation plan be submitted prior to construction.

JURISDICTION OF THE BOARD

This Board has jurisdiction over Miramar's application pursuant to Division 2 of the NWNSRTA.¹⁴ Relevant sections in that Division allow the Board to issue a licence.¹⁵ In deciding to issue a licence or engage in any other statutory function, the Board must follow the objects of the governing legislation, which are:

... to provide for the conservation and utilization of waters in Nunavut, except in a national park, in a manner that will provide the optimum benefit from those waters for the residents of Nunavut in particular and Canadians in general.¹⁶

In setting the terms and conditions of this licence, the Board is guided by these objects and by the NIRB Project Certificate that covers these same matters. The Board intends to meet its statutory duty to make *all* reasonable efforts to minimize *any* adverse effects on aquatic ecosystems. Reading the several Articles of the NLCA together, which the Board is entitled to do to understand its jurisdiction,¹⁷ the Board relies on the broad definition of "ecosystemic" found in Article 12.1.1 of the NLCA to require not only NIRB but also the NWB to ensure all components of the ecosystem such as fish and fish habitat are protected within the parameters of section 71 of the *Act*.

For all matters relating to its licence application, the burden of proof in this Hearing rests with the Applicant. The NWB Rules of Practice state: "In cases in which the Board accepts evidence, any party offering such evidence shall have the burden of introducing appropriate evidence to support its position. Where there is conflicting evidence, the Board will decide which evidence to accept and will generally act on a balancing of the evidence".¹⁸ Where a party presents no evidence supporting or rejecting the applicant's evidence, the NWB will base its decision on its own assessment of the Applicant's request.

REQUIREMENTS OF THE NWNSRTA

Objects of the Board and its Relationship to other Bodies

Land Use Plans

The Project area currently lies within the West Kitikmeot Land Use Planning Region where there is no approved Land Use Plan; consequently, the Board was not required pursuant to subsection 36(2) of the NWNSRTA, to consider the Project's conformity with a Land Use Plan.

¹⁴ Sections 42-81 of the NWNSRTA.

¹⁵ See sections 42, 48, 55, 56, and 70 of the NWNSRTA.

¹⁶ Section 35 of the NWNSRTA.

¹⁷ See Article 2 and section 2.9.1 of the NLCA.

¹⁸ Nunavut Water Board *Rules of Practice and Procedure for Public Hearing*, section 8.13.

Relationship to Environmental Assessment

For the purpose of Miramar's Application, two Articles of the NLCA are relevant and binding: Article 12 (Impact Assessment) and Article 13 (Water Management). Where possible both Articles must be read together and interpreted as one.

A full environmental assessment review pursuant to Article 12 of the NLCA was completed and a NIRB Project Certificate issued on September 15, 2006. NIRB also reviewed modifications to the Project proposed by MHL, and subsequently advised the NWB that section 12.4.3 of the NLCA applied to the modifications proposed by MHL, and as such, the modifications are exempt from further screening.¹⁹

The NIRB Project Certificate has several conditions relating directly, or by implication to the water licence, including conditions related to monitoring,²⁰ fish and aquatics,²¹ environmental management,²² and abandonment and restoration.²³ The NWB confirms that the licence meets the requirements of the Project Certificate as it relates to the jurisdiction of the NWB.

Article 20 of the NLCA

Separate from the Inuit Impact Benefit Agreement negotiation, KIA and Miramar addressed the impacts of the project on Inuit water rights pursuant to Article 20 of the NLCA and section 63 of the NWNSRTA. KIA confirmed that it has entered into a water compensation agreement with Miramar and KIA is satisfied that compensation concerns related to Inuit water rights are resolved.²⁴

Recommendations on Marine Areas

Section 41 of the NWNSRTA permits the Board to advise and make recommendations respecting any marine matters that may arise to any department or agency of the Government of Canada or the Government of Nunavut.²⁵

The Board has no recommendations on marine areas for this Application.

¹⁹ Letter to Thomas Kabloona, Acting Chair, NWB, Re: Exempt from Screening – Project Modifications Arising from Ongoing Detailed Engineering Associated with the Doris North Gold Mine Project from Stephanie Briscoe, Executive Director, NIRB, dated July 18, 2007, at p. 3..

²⁰ NIRB Project Certificate No. 3 – Monitoring requirements No. 4, Nos. 8-18.

²¹ NIRB Project Certificate No. 3 – MMER requirements No. 7.

²² NIRB Project Certificate No. 3 – Environmental Management requirements Nos. 5-6, Nos. 32-33.

²³ NIRB Project Certificate No. 3 – Closure and Reclamation requirements No. 31.

²⁴ Nunavut Water Board Hearing Re: Doris North Project, Hearing Transcript, August 13, 2007, at p. 192.

²⁵ Section 41 of the NWNSRTA states:

The Board may, either jointly with the Nunavut Planning Commission, the Nunavut Impact Review Board and the Nunavut Wildlife Management Board, as established by the Agreement, acting as the Nunavut Marine Council referred to in section 15.4.1 of the Agreement, or on its own, advise and make recommendations respecting any marine area to any department or agency of the Government of Canada or the Government of Nunavut, and those governments shall consider that advice and those recommendations when making any decision that may affect that marine area.

DECISION TO ISSUE

Following the public hearing and for reasons elaborated further below, the Board has decided to issue Water Licence 2AM-DOH0713 (Licence) subject to the conditions set out therein.²⁶ The Licence contains terms and conditions the Board feels are necessary to protect the environment, conserve the water resources and provide appropriate safeguards in respect of the Licensee's use of waters and deposit of wastes. The Licence also parallels the recommendations and suggestions made by the NIRB in the Environment Assessment Report approved by the Minister.²⁷

Issuance of a Licence

As stated above and pursuant to subsection 42(1) of the NWNSRTA, the Board has decided to issue the Licence subject to the terms and conditions set out therein and explanation herein. In issuing the Licence, the Board is satisfied that the application contains the required information based on the NWB Guidelines and is in the proper form having regard to the NWNSRTA and associated regulations.²⁸

Assumptions

Where there was doubt in the Board's mind about a certain parameter or standard, the Board has imposed stringent monitoring conditions to ensure the company will be meeting its promises of performance made in its written application and at the Cambridge Bay Final Hearing.

Applications in Relation to Licenses

Overall, the Board is satisfied that the requirements of section 48 of the NWNSRTA have been met. MHL filed an application which complied with the Board's rules, including the application fee,²⁹ and subject to the discussion with regard to correcting the calculation, the water use fee³⁰ as required by the regulations. The Applicant also provided the necessary information to evaluate the qualitative and quantitative effect of the use of water or the deposit of waste into water.

As stated previously, on June 8, 2007, Miramar advised the NWB of a series of proposed modifications to the Project. On June 21, 2007, the NWB advised NIRB of the proposed modification and requested NIRB make a determination as to whether or not these proposed modifications required screening pursuant to Article 12 of the NLCA. On July 18, 2007, NIRB notified the NWB that section 12.4.3 of the NLCA applied to the

²⁶ The Licence has been issued under separate cover.

²⁷ NIRB Environmental Assessment Report issued to the INAC Minister on March 6, 2006, and accepted by then Minister Prentice on July 28, 2006.

²⁸ Northwest Territories Water Regulations, S.O.R./93-303 [hereinafter Regulations] and Application of Regulations made under paragraph 33(1)(m) or (n) of the Northwest Territories Waters Act in Nunavut Order, S.O.R./2002-253.

²⁹ In accordance with section 48(1) of the Regulations a fee of \$30 was provided with the Initial Application on March 27, 2002, Receipt no. C116855.

³⁰ In accordance with paragraph 9(1)(b) of the Regulations water use fee.

proposed modifications, and as such, the modifications are exempt from further screening.

Application to Amend or Application for future Modifications

In relation to future applications to amend or modify the Project, and particularly those related to Tail Lake, the Board reminds Miramar that it must comply with the NIRB Project Certificate, including the following conditions:

5. MHL shall report by January 1st of each calendar year to NIRB on MHL's development plan for future phases of the Hope Bay Belt, including identifying development plans that may affect the selection of Tail Lake as the preferred alternative for tailings management.

6. MHL shall immediately notify NIRB of any further alternatives assessments of the Tail Lake tailings impound area, if that analysis concludes that Tail Lake may no longer be the preferred option for tailings disposal.

34. If it becomes necessary, MHL shall give notice of any planned changes to the mine facility, including Tail Lake and its operation, to the regulatory authorities and NIRB through its Monitoring Officer, immediately.

Assignment of a Licence

The Board reminds Miramar that any sale or other disposition of any right, title or interest in an appurtenant undertaking must be comply with the licence assignment requirements set out in section 44 of the NWNSRTA³¹

Term of Licence

In accordance with section 45 of the NWNSRTA, the term of a licence or any renewal may be as long as twenty-five years.

Keeping in mind the operating life of the mine is two years, the Application before the Board is for a relatively short eight year licence. MHL submitted that the start to end of the decommissioning the Doris North projects extends over approximately ten years, thus, an eight-year licence provides MHL with certainty against the construction, operation, and closure plans but still provides all interested parties with an opportunity to review its performance prior to the issuance of a second licence for the final closure and post-closure monitoring.³²

Yet KIA and NTI recommend that the duration of the licence be no longer than five years in length, in order to provide the Board with an opportunity to review water quality monitoring data, and the overall success of the water and waste management plan at Doris North before Miramar enters the phase of post-closure monitoring.³³ This proposed timing is recommended to require Miramar to defend their history of environmental

³¹ Assignment forms may be obtained from <http://nunavutwaterboard.org/ftp/administration>.

³² Nunavut Water Board Hearing Re: Doris North Project, Hearing Transcript, August 14, 2007, at p. 444.

³³ Nunavut Water Board Hearing Re: Doris North Project, Hearing Transcript, August 13, 2007, at p. 194.

management and propose how they plan to successfully complete the post-closure phase based on the information they've generated over the five-year water licence.³⁴

The Board understands the desire of MHL for certainty, and also understands KIA and NTI's desire for accountability. With this balance in mind, the Board has decided on a six year term for the licence. The Board notes that the renewal of the water licence will occur at approximately the same time as MHL is anticipating moving to Phase 2 of its water management control strategy (approximately three years after mining ceases).³⁵

WATER LICENCE 2AM-DOH0713 TERMS AND CONDITIONS

This Licence does not take effect until approval of the Minister is given pursuant to section 56 of the NWNSRTA.³⁶

PART A: SCOPE, DEFINITIONS AND ENFORCEMENT

Enforcement and Compliance

For the purpose of ensuring compliance with the Licence, an Inspector designated by the Minister may inspect or examine works, waters or waste and exercise other powers according to the NWNSRTA.³⁷ The NWNSRTA includes serious penalties for breach of the Licence, including furnishing or maintaining security.³⁸ Investigation or inspection are carried out by persons designated by the Minister.³⁹

Metal Mining Effluent Regulations

The Licence states that "Compliance with the terms and conditions of this Licence does not absolve the Licensee from responsibility for compliance with all applicable legislation, guidelines and directives."⁴⁰ The Board was advised by DFO that the MMER applies to the Project.⁴¹

Thus, the following key points must be respected: (1) pursuant to DFO's testimony, the Tailings Impoundment Area cannot be used until Tail Lake is listed on Schedule 2 of the MMER; and (2) while the Licence is issued immediately, it does not authorize habitat

³⁴ Nunavut Water Board Hearing Re: Doris North Project, Hearing Transcript, August 13, 2007, at p. 194.

³⁵ See Exhibit 1: Hard Copy of MHL Doris North Project Presentation to Nunavut Water Board, August 13, 2007, Slides 69 to 72.

³⁶ Subsection 56(1) of the NWNSRTA states:

56(1) the issuance, amendment, renewal and cancellation of a Type A license and if a public hearing is held a Type A licence are subject to the approval of the Minister. The license is considered approved ninety days following issuance of the licence or as otherwise approved by the minister under section 56 of the *Act*.

³⁷ Sections 85-94 of the NWNSRTA

³⁸ Sections 90 of the NWNSRTA.

³⁹ Sections 85-88 of the NWNSRTA.

⁴⁰ Licence Part A, Item 3.

⁴¹ See the evidence on the *Fisheries Act* requirements presented by Tania Gordanier, on behalf of the DFO, Nunavut Water Board Hearing Re: Doris North Project Hearing Transcript, August 14, 2007, beginning at p. 385.

alteration disruption or destruction pursuant to section 35 of the *Fisheries Act*, nor does it authorize the deposit of deleterious substances into fish-frequented waters pursuant to section 36 of the *Fisheries Act*. Accordingly, this License is not intended nor is to be used as evidence to remove or usurp the Governor-in-Councils' discretion with regard to MMER approval for Tail Lake.

PART B: GENERAL CONDITIONS

Water Use Fees

The Licensee is required under the Regulations to provide a fee for the right to the use of water. This fee must be calculated on an annual basis in accordance with subsection 9(b) of the *Northwest Territories Water Regulations* (Regulations). The Board notes that the water use fee to be provided by MHL is incorrectly calculated and must be recalculated to comply with the Regulations.⁴² As no "deposit" for water use fee was provided by the Applicant, the water use fee shall be paid for the first year of the Licence, at the time the Licence is approved by the Minister. For each subsequent year of the Licence the water use fee shall be paid in advance, on the anniversary of the date the License was issued. Payments shall be made to the Manager of Licensing with a cheque payable to the Receiver General for Canada. The Board encourages MHL to consult with the NWB staff for confirmation on proper calculation of water use fees.

Reports filed with the NWB

With the exception of the Annual Report all other plan(s) or report(s) (Plan, or collectively Plans) submitted to the Board under this Licence shall include a proposed timetable for implementation. Unless listed as approved in the License, a Plan cannot be undertaken without subsequent written Board approval. The Board may alter or modify a Plan if necessary to achieve the legislative objectives and will notify the Applicant in writing of acceptance, rejection, or alteration of the Plan. The Plan must then be carried out in manner and timeframe consistent with the Board's direction.

Every Plan to be carried out pursuant to the terms and conditions of this Licence shall become a part of this licence, and any additional terms and condition imposed upon approval of a Plan by the Board become part of this Licence. All terms and conditions of the Licence should be contemplated in the development of a Plan where appropriate.

The Application contains several plans and engineered designs that were reviewed the Board. The Board has approved these as presented unless otherwise indicated in the terms and conditions of the Licence. Specifically, the Aquatic Effects Monitoring Plan, QA/QC Plan, Interim Closure and Reclamation Plan and the Final Closure and Reclamation require formal approval of the Board or Analyst.

PART C: CONDITIONS APPLYING TO SECURITY

Financial Responsibility of the Applicant and Requirement of Security

⁴² Revised Water Licence Application Support Document (April 2007), at p. 247.

The NWNSRTA allows the Board to require a licensee to furnish and maintain security with the Minister in a form determined by the regulations or satisfactory to the Minister.⁴³ Further, in a matter that is at least related to the posting of security, the Board may not issue a licence unless the Board is satisfied that the financial responsibility of the applicant, taking into account the applicant's past performance, is adequate for the mitigation measures and any costs associated with the closing or abandonment of the undertaking. Both of these issues, financial responsibility and security are discussed next.⁴⁴

Type and amount of security

The amount of security required for reclamation of the Project as whole is not in dispute. INAC, using its RECLAIM costing model, estimates the total reclamation security required is \$11.535 million.⁴⁵ KIA, working with Miramar and using its own reclamation costing model, estimates the total reclamation security requires is \$11.714 million.⁴⁶

INAC presents the NWB with a very different position than KIA and Miramar regarding the Board's jurisdiction to assess reclamation security for both land and water. INAC submits that the Board's jurisdiction to order a licensee to post security against reclamation is limited to consideration of abandonment and restoration components related to water.⁴⁷ KIA⁴⁸ and Miramar⁴⁹ disagree with the premise that the Board's jurisdiction to order security is limited only to water related security.

Furthermore, while KIA, INAC and Miramar agree that the amount of security is in the \$11.5 to \$12 million range, their views diverge as to how security is split between the cost of land reclamation and the cost of water related reclamation. INAC estimates that \$5.937 million (\$6.206 million undiscounted) applies to land and \$5.562 million (\$6.118 million undiscounted) to water,⁵⁰ while MHLB estimates that \$7.738 million applies to land and \$4.514 million applies to water.⁵¹

⁴³ Subsection 76(1) of the NWNSRTA states:

76(1) The Board may require an applicant, a licensee or a prospective assignee to furnish and maintain security with the Minister in the form , of the nature, subject to such terms and conditions an in an amount prescribed by, or determined in accordance with, the regulations or that is satisfactory to the Minister.”

⁴⁴ See subsection 57 (b) of the NWNSRTA

⁴⁵ The Board notes that INAC recommended an undiscounted \$12.3 million for security for reclamation liability. The Board accepts Miramar's evidence that not discounting the security is departure from past practice in the Northwest Territories and Nunavut.

⁴⁶ KIA submission to the NWB regarding the Doris Northe Gold Project water license application, received July 27, 2007, at p. 12. [Hereinafter “KIA Written Submission.”]

⁴⁷ INAC Supplementary Information Type A Water Licence Application for the Doris North Gold Mine by MHLB, August 24, 2007, at p. 2. [Hereinafter “INAC Supplemental Submission on Security.”]

⁴⁸ Submissions of the KIA in the matter of the Doris North Project and Water Licence Security, August 24, 2007, at p. 3. [Hereinafter “KIA Supplemental Submission on Security.”]

⁴⁹ MHLB Submission on Financial Security to the Nunavut Water Board, August 24, 2007 at p. 4. [Hereinafter “MHLB Supplemental Submission on Security.”]

⁵⁰ Indian and Northern Affairs Canada Intervention, Doris North Gold Mine, July 30, 2007, Appendix B: Reclamation Cost Estimate, pp. 3-4. [Hereinafter “INAC Written Submission.”]

⁵¹ Exhibit 1: Hard Copy of MHLB Doris North Project Presentation to Nunavut Water Board, August 13, 2007, Slide 106: Estimate of Water vs. Land Related Reclamation Liability.

Similarly, with regard to the form that security should take, KIA and Miramar present the NWB with a very different position than INAC. Simply put, KIA insists that all risks and liabilities on Inuit-owned land, regardless of whether they're land or water, are secured by KIA,⁵² while INAC contends that the security must be held by the Minister or his delegate:

The Minister must not be placed in a situation where Board-ordered security could be expended other than as determined by the Minister. Placing any party other than the Minister or his delegate...in a control position over the security—such as by naming a third-party payee—would fail to give the Minister safe, ready access to the funds.⁵³

While agreeing with the total amount of reclamation security required for the Project, Miramar, understandably, objects to being put in a position of having to “double bond” for the security because KIA, as the landowner, and INAC cannot agree on a mechanism for jointly administering security:

To date INAC and the KIA have been unable to reach an agreement on how security held against reclamation at the Doris North Project could be jointly administered to reclaim the site if MHL did not meet its obligations.

Hence KIA has indicated that they will seek \$11.7 Million in security and INAC have recommended that the NWB seek \$6.1 Million in security against water only related reclamation.

This would result in MHL having to post total security bonds of \$17.8 Million against an acknowledged reclamation liability of \$11.5 to \$12 Million (an excess of \$5.8 to \$6.3 Million)

This \$6 Million in double bonding is a significant issue to MHL and to the mining industry in as it has the potential to render larger projects to be developed on Inuit Owned Lands becoming totally uneconomic.⁵⁴

Adding further complexity to this “double bonding” issue is DFO’s requirements for security. DFO submitted that it obtains financial securities in the form of irrevocable letters of credit, having obtained securities for the jetty construction at just over \$67,000, and anticipating requirements for performance bonds to ensure that fish habitat compensation works are constructed and function as intended. Also, under the MMR, there is a legal requirement to obtain financial securities for works associated with the

⁵² Nunavut Water Board Hearing Re: Doris North Project, Hearing Transcript, August 13, 2007, p. 205, lines 11-13.

⁵³ INAC Supplemental Submission on Security, at p. 7.

⁵⁴ Exhibit 1: Hard Copy of MHL Doris North Project Presentation to Nunavut Water Board, August 13, 2007, Slide 102: Double Bonding for Reclamation Liability.

tailings impoundment area.⁵⁵ DFO submitted that it is not its intention to increase the global amount of securities that would be required by the company, rather DFO anticipates “that there would be a mechanism where they could work together with INAC to ensure that there was no duplication of those financial securities.”⁵⁶

The Board addresses each of the issues of the Board’s jurisdiction over land and water security, the amount of security, and the form of the security, including payees, below.

The Board’s Jurisdiction over Land and Water Security

Subsection 76(1) of the NWNSRTA states:

76(1) The Board may require an applicant, a licensee or a prospective assignee to furnish and maintain security with the Minister in the form, of the nature, subject to such terms and conditions and in an amount prescribed by, or determined in accordance with, the regulations or that is satisfactory to the Minister.

In its supplemental submission on security, which was very helpful, INAC reviewed the NLCA,⁵⁷ and the NWNSRTA,⁵⁸ and identified the sections from which the Board’s

⁵⁵ Nunavut Water Board Hearing Re: Doris North Project, Hearing Transcript, August 14, 2007, at p. 387.

⁵⁶ Nunavut Water Board Hearing Re: Doris North Project, Hearing Transcript, August 14, 2007, at p. 402.

⁵⁷ INAC Supplemental Submission on Security, at p. 2, states:

The NLCA defines “water” to mean “waters in any river, stream, lake or other body of inland waters on the surface or under ground in the Nunavut Settlement Area, and includes ice and all inland ground waters, but does not include water or ice in marine areas”

The NLCA states that the Nunavut Water Board has “responsibilities and powers over the regulation, use and management of water in the Nunavut Settlement Area” The provision goes on to state that the Nunavut Water Board’s responsibilities and powers are at least equivalent to the powers and responsibilities currently held (at the time of the Claim) by the Northwest Territories Water Board under the *Northern Inland Waters Act* Finally, the provision affords the Nunavut Water Board “any other responsibilities acquired under Article 13 of the NLCA

The major component of the Nunavut Water Board’s jurisdiction flows from section 13 7 1, which states that subject to identified exceptions” no person may use water or deposit waste into water without the approval of the NWB”

Article 20 of the NLCA (Section 20 3 1) provides that in consideration whether to approved a use of water or deposition of waste, the Nunavut Water board must consider whether the Designated Inuit Organisation identified for the purposes of article 20 has entered into a compensation agreement with the applicant for the license, which compensation will be for “any loss or damage which may be caused by the change in quality, quantity or flow of water”.

⁵⁸ INAC Supplemental Submission on Security, at p.3, states:

The limited sphere of jurisdiction is carried forward in the NWNSRTA The Act gives a definition of water consistent with that in the NLCA The Act states that “ The objects of the Board are to provide for the conservation and utilization of waters in Nunavut in a manner that will provide optimum benefit from those waters for the residents of Nunavut in particular and Canadians in general”

The powers of the Board include the issuance of licences for activities that would otherwise constitute violations of sections 11 or 12 of the NWBSRTA Section 11 prohibits the unauthorized

jurisdiction is derived. Summarily, INAC asserts the NWB's jurisdiction begins and ends with water and the matters that do not touch and concern water are beyond its power and this extends to the Board's jurisdiction in relation to security deposits pursuant to section 76 of the NWNSRTA.

Further, INAC submits that even if it is lawful for the NWB to order security over land-related matters, there is no benefit in doing so as the NWNSRTA gives the Minister power only to draw upon security for matters related directly to water.⁵⁹

use of waters Section 12 prohibits the unauthorized deposit of waste (i) in waters, or (ii) under conditions in which waste may enter waters, all of the Act's other references to "deposit of waste" must be read in light of these specified conditions

⁵⁹ INAC Submission on Security, at pp. 2-3. The referenced sections, with emphasis added by INAC, state: 76(2) The security provided by a licensee may be applied by the Minister

(a) to compensate, fully or partially, a person, including the designated Inuit organization, who is entitled to compensation under section 13 [Right to Compensation] and who has been unsuccessful in recovering that compensation, if the Minister is satisfied that the person has taken all reasonable measures to recover it; and

(b) to reimburse Her Majesty in right of Canada, fully or partially, for reasonable costs incurred by Her Majesty in right of Canada under subsection 87(4) or, subject to subsection (3), under subsection 89(1).

Referenced section 87(4) must be read in conjunction with 87(1):

87. (1) An inspector may direct any person to take such reasonable measures as the inspector may specify, including the cessation of an activity, to prevent the use of waters or the deposit of waste or the failure of a work related to the use of waters or the deposit of waste, or to counteract, mitigate or remedy the resulting adverse effects, where the inspector believes, on reasonable grounds,

(a) that

(i) waters have been or may be used in contravention of subsection 11(1) or of a condition of a licence,

(ii) waste has been or may be deposited in contravention of subsection 12(1) or of a condition of a licence, or

(iii) there has been, or may be, a failure of a work related to the use of waters or the deposit of waste, whether or not there has been compliance with any standards prescribed by the regulations or imposed by a licence; and

(b) that the adverse effects of that use, deposit or failure are causing, or may cause, a danger to persons, property or the environment

...

(4) Where a person fails to comply with a direction given under subsection (1), the inspector may take the measures referred to in that subsection and may, for that purpose, enter any place in Nunavut, other than a place that is designed to be used and is being used as a permanent or temporary private dwelling-place.

89. (1) Where the Minister believes, on reasonable grounds, that

(a) a person has closed or abandoned, temporarily or permanently, a work related to the use of waters or the deposit of waste in Nunavut, except in a national park, and

INAC conceded that isolating land from water is difficult and does not dispute that land and water are closely interconnected.⁶⁰ Despite the difficulties in doing so and citing the Board's past practice in the 2001 Boston Renewal Decision, INAC encouraged the Board to depart from its practice of declining to distinguish between components of a project that affect land and those that affect water and to comply with the intention of NLCA parties and Parliament to limit the Board's jurisdiction to water.⁶¹ INAC submitted that difficulty in doing so should not give the Board the right to "fail to apply the evidence to determine which components of a project may affect water and which likely do not."⁶² INAC submitted:

Though there may be few sharp dividing lines between land and water, the Board must be prepared to quantify the percentage of a proposed reclamation activity's relatedness to land versus its connection to water, and identify those elements of reclamation activity that are substantially related to water. Elements that have only a remote connection to water, or which are unlikely to affect water, must be omitted from the security calculation. Likewise, activities aimed substantially at both land and water may be correspondingly apportioned according to a reasonable ratio.⁶³

With respect to a coordinated reclamation plan, INAC agrees with the Board's position in the 2001 Boston License Renewal that a proponent should submit a single plan and reclamation activities should ideally be coordinated. INAC supports "using for costing purposes an assumption that there will be a single remediation project aimed at both land and water",⁶⁴ while stating that "...hopes for a coordinated reclamation project do not expand the jurisdiction of the Board."⁶⁵

By contrast, KIA submits that the Board does have legal authority to order land-related security.⁶⁶ KIA further submitted that the evidence heard at the hearing supports its position that splitting land-related and water-related security as suggested by INAC results in discretionary and arbitrary divisions which leaves KIA and Inuit interests at risk

(b) either

(i) the person has contravened any condition of a licence or any provision of this Part or the regulations, whether or not the condition or provision relates to the closure or abandonment, or

(ii) the past operation of the work or its closure or abandonment may cause a danger to persons, property or the environment,

the Minister may take any reasonable measures to prevent, counteract, mitigate or remedy any resulting adverse effect on persons, property or the environment and may, for that purpose, enter any place in Nunavut, other than a place that is designed to be used and is being used as a permanent or temporary private dwelling-place.

⁶⁰ INAC Supplemental Submission on Security, at p. 5.

⁶¹ INAC Supplemental Submission on Security, at p. 5.

⁶² INAC Supplemental Submission on Security, at p. 5.

⁶³ INAC Supplemental Submission on Security, at p. 5.

⁶⁴ INAC Supplemental Submission on Security, at p. 6, emphasis in original.

⁶⁵ INAC Supplemental Submission on Security, at p. 6.

⁶⁶ KIA Supplemental Submission on Security, at p.3.

of being left with reclamation liabilities that exceed the amount of land-related security held.⁶⁷

After a review of section 76 of the NWNSRTA, section 12(1) of the NWT Water Regulations, and other authorities,⁶⁸ to establish the definition of “appurtenant undertaking” used in section 12(1) of the Regulations, KIA reduced the definition of “appurtenant undertaking” to “an undertaking to which the right granted by a water licence are annexed.”⁶⁹

In a series of submissions, KIA first submitted that it is clear that the Doris North licence will be issued in relation to an appurtenant undertaking and that section 76 of the NWNSRTA and section 12 of the NWT Water Regulations read together support that the NWB has the discretion to order security in relation to the entire appurtenant undertaking which is the Doris North mine. KIA submits there is no suggestion anywhere in the Act or the Regulations that the Board is limited to ordering security only in relation to water aspects of the appurtenant undertaking.⁷⁰

Secondly, KIA submitted that its position is also consistent with DIAND’s mine site reclamation policy for Nunavut:

[C]areful review of the *Mine Site Reclamation Policy for Nunavut* does not indicate that it calls for land and water Security to be split in the water licensing context. The policy calls for 100% of the project related liability to be secured but it does not specify that land and water related Security should be split.⁷¹

Thirdly, KIA submitted that although in historical instances of mine developments on Crown land it may have been convenient for the Minister to hold a portion of security under a water licence and a portion under a crown lease, this practice is not useful for mine developments on Inuit Owned Land because “it leaves the landowner at risk if the Security held by the Crown is insufficient to completely close and reclaim a site.”⁷² KIA submits it is this approach that leads to the double bonding problem.⁷³

Fourthly, KIA returned to its argument that there is no clear and principled way to split land- and water-related elements of a project and offered support by referring to the NWB’s 2001 Boston Renewal Decision:

⁶⁷ KIA Supplemental Submission on Security, at p. 2.

⁶⁸ KIA referred to Black’s Law Dictionary: “The word “appurtenant” is defined in Black’s Law Dictionary (7th Edition) as “annexed to a more important thing”; and to the definition of “appurtenant undertaking” in s. 4 of the *Northern Inland Waters Act* which reads: “‘appurtenant undertaking’ means an undertaking in relation to which a use of waters or a deposit of waste is permitted by a licence.”

⁶⁹ KIA Supplemental Submission on Security, at p. 4.

⁷⁰ KIA Supplemental Submission on Security, at p. 5.

⁷¹ KIA Supplemental Submission on Security, at p. 5.

⁷² KIA Supplemental Submission on Security, at p. 5.

⁷³ KIA Supplemental Submission on Security, at p. 5.

In the Boston licence as in other recent licences, the NWB has often refused to divide up Security into land related or water related Security and KIA has supported this approach by NWB. The Board put it this way in the 2001 renewal of the Boston licence:

DIAND and the KIA present the NWB with strong diverging positions regarding whether land and water should be assessed separately or together when determining security costs and the payee. In two of the NWB's previous decisions,⁷⁴ the NWB reached the conclusion that there is a clear connectedness between land and water. In the 1999 Boston Licence Renewal, the NWB decided that the security should be made payable to both DIAND and the KIA. For the reasons given in the Boston 1999 decision, we agree that these principles continue to apply to the Application and we adopt them entirely in the case of this Application as suggested by the KIA. The NWB takes a holistic but also practical approach to reclamation: on the one hand, the NWB believes that the elements of the environment, including land and water, are interconnected; what affects one part of the environment can ultimately have an impact on other environmental elements (water and vegetation, for example). By altering the natural elements of the environment, traditional Inuit culture and use of the water can be directly affected; on the other hand, the NWB believes, where possible, that a proponent should be required to submit one single reclamation plan, without segregating land-related reclamation and water-related reclamation because reclamation activities upon abandonment will likely be more efficient and undoubtedly less onerous if conducted at the same time by the same person.⁷⁵

KIA's submitted that the NWB has the jurisdiction and authority to order security for the whole of the Doris North project as described in the MHL application. The Board is not legally required to take full security but it cannot take more than is allowed by section 12 of the Regulations.⁷⁶ KIA contends that it is the Board that should decide on the appropriate amount of security for the appurtenant undertaking and that the Minister's role according to the statutory scheme is to determine if the form of security is acceptable or not.⁷⁷

Similar to KIA, Miramar submitted arguments based on the Board's broad jurisdiction to impose licence terms and conditions, *including closure and abandonment of the appurtenant undertaking*, pursuant to subsection 70(1) of the NWNSRTA,⁷⁸ and on the

⁷⁴ Omitted footnote in the original is to the NWB decisions in *Re BHP Diamonds Inc.* (1999), 29 C.E.L.R. (N.S.) 248, and Lupin Licence Renewal 2000.

⁷⁵ KIA Supplemental Submission on Security, at p. 6.

⁷⁶ KIA Supplemental Submission on Security, at p.7.

⁷⁷ KIA Supplemental Submission on Security, at p.7.

⁷⁸ MHL Supplemental Submission on, at p.2. Subsection 70(1) states:

70. (1) Subject to this Act and the regulations, the Board may include in a licence any conditions that it considers appropriate, including conditions relating to
(a) the manner in which waters may be used;

language of subsection 76(1), gives the Board and the Minister broad discretion in setting security and its various features.⁷⁹

MHBL further relies on *CanZinco Ltd. v. Canada (Minister of Indian Affairs and Northern Development)* (Canzinco), for the interpretation of subsection 76(1), stating that *CanZinco* at paragraphs 40, 81, 92, and 93,⁸⁰ provides for the following:

In *CanZinco Ltd. v. Canada (Minister of Indian Affairs and Northern Development)* (“*CanZinco*”), the Court concluded that subsection 76(1) of the Act gives the Board the jurisdiction to determine the amount of the security; that it is within the Minister's discretion to require a licensee to provide the security, in the amount determined by the Board, in a form or nature that is satisfactory to the Minister; and that the Minister has the discretionary power to approve or reject the Licence in its entirety.⁸¹

MHBL cites the wording of subsection 76(1) of the Act, including that the security may be determined in accordance with the regulations or such that it is satisfactory to the

-
- (b) the quantity, concentration and types of waste that may be deposited and the manner of depositing waste;
 - (c) the studies to be undertaken, works to be constructed, plans, including contingency plans, to be submitted, and monitoring programs to be undertaken; and
 - (d) any future closing or abandonment of the appurtenant undertaking.

⁷⁹ MHBL Supplemental Submission on Security, at p.2.

⁸⁰ 2004 FC 1264(CanLII). The paragraphs cited by Miramar state:

[40]The Minister says that he did not err in his interpretation of the Act. Subsection 76(1) of the Act gives the Board the jurisdiction to determine the amount of the security. It is within the Minister's discretion to require a licensee to provide the amount of security, determined by the Board, in a form or nature that is satisfactory to the Minister.

[81]In the case at bar, the Minister points out that the Minister has no specific statutory duty to determine the amount of security. Rather, the Board has the jurisdiction to determine the amount of that security. The Minister does have the discretionary power to approve or reject the licence in its entirety. This discretion was exercised by the approval of the licence.

[92]In voting down the amendment, of course, we don't know if the Committee was accepting the clear distinction between "amount" and "form" that Mr. Dunlop makes or whether, in fact, they were approving the "slightly different nuances" that so troubled Mr. Vellacott. All in all, I am inclined to the view that the Committee was accepting Mr. Dunlop's assurances concerning the meaning of subsection 76(1) ("I think the wording does the same thing as the bill . . . they're both the same, I hope") and that the intention behind the provision was that the Minister would decide the "form" of the security, while the Board would decide the "amount" in accordance with the prescribed statutory and regulatory formula.

[93]Both the applicant and the Minister have taken the Court through a purposive analysis of subsection 76(1) as articulated by the Supreme Court of Canada in *Rizzo*. To be blunt, such an analysis does not yield an entirely clear result. There are good arguments on both sides. On balance, however, the history of this legislation and the general scheme of the Act suggest to me that the Minister's interpretation of the Minister's discretion concerning the amount of the security that may be required by the Board pursuant to subsection 76(1) should carry the day.

⁸¹ MHBL Supplemental Submission on Financial Security, at p. 3.

Minister, and the wording of the subsection 12(2)⁸² of the NWT Water Regulations which gives the Board the option, when fixing the amount of security, of considering the ability of the applicant to pay the costs of abandonment, restoration, and post-abandonment measures, and the past performance of the applicant in respect of any other licence, to emphasize the degree of discretion afforded to the Board and the Minister with regard to security.⁸³ MHLB submits this discretion is subject only to the limit in subsection 12(1)⁸⁴ which limits the amount of security to the aggregate of the costs of abandonment of the mine, restoration of the site, and post-abandonment measures, but does not require that such costs be included.⁸⁵

After careful consideration, the Board accepts the submissions of both KIA and MHLB on the matter of the Board's jurisdiction pursuant to section 76(1) of the NWNSRTA. In particular, in the Board's mind, the language of subsections 76(1) and 70(1)(d), as well as the wording of the section 12 of the NWT Water Regulations, including the use of the words "appurtenant undertaking" provide the Board with jurisdiction to determine the total amount of security – water and land-related - for the Project. Furthermore, while the Board is not bound by its previous decisions, the Board has reviewed and re-affirms its reasons in its 2001 Boston Renewal Decision, particularly those reasons cited above by MHLB. Most importantly, the Board agrees with MHLB that this decision is consistent with the Federal Court's interpretation of section 76(1) of the NWNSRTA in the Canzinc decision.

The Board notes that in KIA's reply submission, KIA takes exception to INAC's interpretation of section 87(1) of the NWNSRTA as authority that the Minister may only address water related concerns. KIA states that "even a simple reading of section 87 shows that it can be construed much more broadly than suggested in the INAC argument."⁸⁶ The Board agrees with KIA. It is not the place of this Board to decide on the scope of the Minister's authority to apply security pursuant to section 87 of the NWNSRTA. However, should it be necessary for the Minister to apply security, given the interconnectedness between water and land and the difficulty in dividing land and water components (conceded by all parties and affirmed by the Board), the Board encourages INAC to reconsider its narrow interpretation of the Minister's power to draw upon security

⁸² NWT Water Regulations subsection 12(2) states:

12(2) In fixing an amount of security pursuant to subsection (1), the Board may have regard to
(a) the ability of the applicant, licensee or prospective assignee to pay the costs referred to in that subsection; or
(b) the past performance by the applicant, licensee or prospective assignee in respect of any other licence.

⁸³ MHLB Submission on Financial Security, at p. 3.

⁸⁴ NWT Water Regulations subsection 12(1) states:

12(1) The Board may fix the amount of security required to be furnished by an applicant under subsection 17(1) of the Act in an amount not exceeding the aggregate of the costs of
(a) abandonment of the undertaking;
(b) restoration of the site of the undertaking; and
(c) any ongoing measures that may remain to be taken after the abandonment of the undertaking.

⁸⁵ MHLB Supplemental Submission on Financial Security, at p. 3.

⁸⁶ Reply Submissions of the Kitikmeot Inuit Association, at p. 4.

Amount of Security

Fortunately, the amount of security required for reclamation of the Project as whole is not in dispute. INAC, using its RECLAIM costing model, estimates the total reclamation security required at \$11.535 million.⁸⁷ KIA, using its own reclamation costing model and working with Miramar, estimates the total reclamation security at \$11.714 million. Both estimates discount the future costs at a discount rate of 3%. Miramar accepts that the total security required is in the \$11.5 - \$12 m range. Based on the evidence, pursuant to section 76(1) of the NWNSRTA and the Board's determination that it has the jurisdiction to determine the amount of security for the Project as a whole, the Board sets the total amount of security at \$11.714 million.

The Board also accepts INAC's recommendation that due to the short mine life, the water licence should require security estimates to be revised six months and then again 18 months after the start of mining operations, as well as provide for annual adjustments to the reclamation security at the Board's request.⁸⁸ The Board notes that the six month and 18 month time frames coincide with the Board's requirements for submissions of closure and reclamation plans.

Form of Security

In its submission MHLB acknowledged its responsibility to post security against the full reclamation liability for the Project and there is consensus that it would be unfair if it were to be required to post security that exceeds the generally accepted amount of \$12 million. MHLB pointed to both INAC and KIA policy to establish that all parties should attempt to resolve the issue without requiring MHLB to post security in excess of \$12 million.⁸⁹ Additionally, MHLB referenced INAC policy to assert that INAC has accepted responsibility to ensure that financial security required does not surpass total estimates for land- and water-related reclamation elements.⁹⁰

⁸⁷ The Board notes that INAC recommended an undiscounted \$12.3 million for security for reclamation liability. The Board accepts Miramar's evidence at Exhibit 1: Hard Copy of MHLB Doris North Project Presentation to Nunavut Water Board, August 13, 2007, Slide 101: Estimated Security for Reclamation Liability that not discounting the security is departure from past practice in the Northwest Territories and Nunavut.

⁸⁸ Nunavut Water Board Hearing Re: Doris North Project, Hearing Transcript, August 14, 2007, at p. 277, lines 16-22.

⁸⁹ MHLB Supplemental Submission on Security, at p. 2-3.

⁹⁰ MHLB Supplemental Submission on Security, at p. 1:

INAC's Mine Site Reclamation Policy for Nunavut –2002 states:

Since financial security has become a multi-jurisdictional issue, co-ordination is an important consideration. To ensure that financial security is most efficiently and effectively applied, DIAND will facilitate discussions between the various regulatory bodies to promote the co-ordination of financial security obligations. This will include:
...

- ensuring that, at any given time during the life of the mine, the total financial security for mine site reclamation in place, subject to the timing of any application for credit for progressive reclamation, is equal to the total outstanding reclamation liability of the mine site, and the financial security for closure-related activities, imposed by land and water

MHBL suggested four options that could be adopted by INAC and KIA to address the situation:

1. INAC would hold the full reclamation security. INAC and KIA would have an agreement covering how they could jointly manage reclamation activity if the proponent fails to meet its reclamation obligation.
2. INAC would hold full reclamation security for the project and in return provide the KIA with an indemnity against liability resulting from the mining company's activity on IOL. INAC and KIA could then have an agreement where they would jointly manage reclamation activity if the proponent failed to meet its reclamation obligation.
3. INAC and KIA each hold reclamation security that in combination represents the total estimated reclamation liability (i.e. with no overlap). KIA and INAC have an agreement if the proponent fails to meet its obligations. Both parties provide the other party with an indemnity against additional claims made by the other party against liability resulting from the mining company's activity on IOL.
4. INAC and KIA would jointly hold the full reclamation security. INAC and KIA would have an agreement covering how they could jointly manage reclamation activity if the proponent fails to meet its reclamation obligation (e.g. Boston).⁹¹

As submitted by MHBL, the fourth option with INAC and KIA jointly holding the full reclamation security is the option this Board settled on as the preferred option in its decision in Boston, and it is the approach that the Minister of the day accepted. The Board sees no reason to vary from this approach; however, the Board agrees with the submissions of both INAC and KIA that the final determination with respect to the most appropriate form of security must be left to the Minister. Again, this is consistent with the Federal Court's interpretation of section 76(1) of the NWNSRTA in Canzincos, and it is consistent with the Board's previous decision in Boston.⁹² As Miramar submits, it is also consistent with INAC's Mine Site Reclamation Policy for Nunavut (2002).⁹³

The Board recommends to the Minister that the decision as to the form of the security be made in consultation with the KIA, Miramar and DFO.

PART D: CONDITIONS APPLYING TO CONSTRUCTION

jurisdictions cumulatively, does not exceed the total reclamation cost estimates for both the land-related and water-related reclamation elements at each mine; (at pp. 9 and 10; emphases added).

⁹¹ Exhibit 1: Hard Copy of MHBL Doris North Project Presentation to Nunavut Water Board, August 13, 2007, Slides 104 and 105: Options for Resolving the Double Bonding Issue.

⁹² Exhibit 1: Hard Copy of MHBL Doris North Project Presentation to Nunavut Water Board, August 13, 2007, Slides 104 and 105: Options for Resolving the Double Bonding Issue .

⁹³ See MHBL Supplemental Submission on Security, at footnote ii.

Upon completion of construction of infrastructure the Board generally requires a final monitoring report to confirm as built details.

All Parties agreed that surface monitoring was needed; however, no party presented specific recommendation on regulated effluent quality limits during construction. Therefore, the Board has imposed limits it deems acceptable to ensure that any waste produced will be treated and disposed of in a manner that is appropriate for the maintenance of the water quality standards and effluent standards.

PART E: CONDITIONS APPLYING TO WATER USE

Section 11 of the NWNSTRA states “... no person shall use, or permit the use of, water in Nunavut except in accordance with the conditions of a licence.”

KIA requested that the Board consider in its assessment of the Applicant’s requested water use volume, the estimate per person based on World Health Organization (WHO) recommendations.⁹⁴ The Board believes the camp water use in a mine work environment may extend beyond the estimates proposed by the WHO and therefore agrees with the water use volumes requested by the Applicant for camp use.

Further, without taking away from the importance of drinking water quality, the Board believes it is outside its jurisdiction to require the applicant to ensure potable treated water comply with the Canadian Drinking Water Quality Guidelines as recommended by the GN-DOE as this is a public health issue.⁹⁵

Finally, if MHLB requires water for the construction, operation and maintenance of a winter road from other exploration licensed operations, an amendment shall be filed under a valid water licence for the additional use of water.

PART F: CONDITIONS APPLYING TO WATER MANAGEMENT

The Board has imposed standard terms and conditions related to water management.

PART G: CONDITIONS APPLYING TO WASTE MANAGEMENT AND WASTE MANAGEMENT PLANS

From an enforcement and compliance perspective, the Board endeavored to write this licence fairly and properly; the Board strives to outline clearly the discharge parameters and other limits of the Licence in a way that will not over-regulate the Project, leading to potential over enforcement. The Board is also aware of the risks to water quality in Nunavut posed by under-regulation.

⁹⁴ KIA Written Submission, at p. 7.

⁹⁵ Department of Environment Government of Nunavut, Review of the Doris North Water License Application, July 2007, at p. 5. [Hereinafter “GN-DOE Written Submission”].

Sewage Treatment: INAC recommended that the construction sewage discharge standards meet the 1992 NWB Wastewater Discharge Guidelines which have been adopted by the Board and the standards should include both maximum grab sample concentrations and monthly average concentrations.⁹⁶ The Board agrees with the standards and concentrations proposed MBHL in their monitoring plan.⁹⁷

Landfarm: MHBL proposed in the Application that the Canadian Council Ministers of Environment Soil Quality Remediation Objectives (CCME SQROs) for use of landfarm treated soils be set to “industrial” objectives. The GN-DOE submitted that:

Typically, remediation standards are not considered “contaminate up to” levels; i.e. it is not acceptable to dispose of or use of remediated soil with residual petroleum hydrocarbon concentrations at pristine or natural areas. Therefore, it is recommended that remedial objectives for soil be tied to end land use objectives. This might limit the application of soil remediated to industrial levels to impacted areas where the soil would not contribute further impacts to clean areas. Soil to be placed in pristine areas should be remediated to a higher standard such as residential/parkland standard.⁹⁸

Accordingly, the Board will undertake consultation with the Parties prior to confirming appropriate SQROs. The applicant is therefore required to seek determination of the Board prior to any use or land application.

Water Quality Model: At the Final Hearing, MHBL provided a detailed description of the use of the water quality model during operations.⁹⁹ MHBL further explained the criteria used to determine whether or not the model would require re-calibration noting that different criteria would be required for different climate conditions.¹⁰⁰

Two issues regarding the water quality model were raised during INAC’s presentation to the Board: (1) the criteria used to trigger re-calibration of the water quality model; and (2) water quality model reporting requirements.

On the first issue, during questioning from MHBL, INAC expressed that it would like to have more confidence in the water quality model and expressed dissatisfaction in the triggers propose by MHBL to re-calibrate the water quality model.¹⁰¹

On the second issue INAC recommended that “Miramar be required to recalibrate the model every three months during operations using all available water quality, hydrology, and climate data. The results of this recalibration should then be used to evaluate the on-

⁹⁶ INAC Written Submission, at p.15.

⁹⁷ MHBL “Monitoring and Follow-up Plan” April 2007.

⁹⁸ GN Submission from Earl Baddaloo to the Technical Meeting titled Review of Doris North Water License (NWBFile #2AM-DOH) submitted by Department of Environment, Government of Nunavut on June 7, at pg. 8

⁹⁹ Nunavut Water Board Hearing Re: Doris North Project, Hearing Transcript, August 13, 2007 at pg 66-68.

¹⁰⁰ Hearing Transcript, August 13, 2007 at pg 68-70.

¹⁰¹ Nunavut Water Board Hearing Re: Doris North Project, Hearing Transcript, August 14, 2007, at p. 28.

going Tail Lake Water Management Strategy and discharge schedule.”¹⁰² In addition, INAC recommended specific reporting requirements:

... as a minimum, [INAC] would like to see recalibration of the model at the end of each discharge period. In summary we would like to see quarterly reporting of the status of the results of the model compared to the actual field data in March, June, September and December. In June, prior to any discharge, in addition to this report, comparing the results, we’d also like to see a discussion and a proposed discharge strategy for that discharge season. And then a September report in addition to the comparison and discussion of discrepancies we would like to see a recalibration based on that entire – on that season’s discharge period.¹⁰³

INAC’s closing statement provides the results of its discussion with MHL in the form of an agreement on the criteria for re-calibration of the water quality model:

Specifically the level of significance for water elevation is 0.1 meters; the level of significance for water quality if a 20 percent deviation above predicted concentrations in Tail Lake. As part of the monthly SNP reports, Miramar will include a summary of the monthly operational assessment of the model proposed in Slide 79 of Miramar’s presentation. In addition, Miramar has committed to submitted an annual report 90 days after the end of the calendar year, March 31st that will summarize the results of the monthly model assessments and any recalibrations that have been carried out. Also included in this report would be the relevant supporting data, SNP and internal modeling results, and discharge volume calculations. This would apply during both operation and closure periods.¹⁰⁴

The Board accepts the resolution provided in INAC’s closing statement.

PART H: CONDITIONS APPLYING TO MODIFICATIONS

Pursuant to Article 12 and section 12.4.3 of the NLCA, a proposed modification submitted under this Licence may require a screening determination by the NIRB. It is the responsibility of the License holder to notify and consult with NIRB to ensure Article 12 requirements are met.

PART I: CONDITIONS APPLYING TO CONTINGENCY PLANNING

GN-DOE is satisfied with the Emergency Response and Contingency Plan (April 2007) as submitted.¹⁰⁵ The Board sees no reason to disagree and approves the plan as presented. However, the Board recognizes that the plan needs to be revised to reflect the changes in project scope identified to the Board since April 2007.

¹⁰² Nunavut Water Board Hearing Re: Doris North Project, Hearing Transcript, August 14, 2007, at p. 267.

¹⁰³ Nunavut Water Board Hearing Re: Doris North Project, Hearing Transcript, August 14, 2007, at p. 285.

¹⁰⁴ Nunavut Water Board Hearing Re: Doris North Project, Hearing Transcript, August 14, 2007, at p. 459.

¹⁰⁵ GN-DOE Written Submission, at p. 8.

PART J: CONDITIONS APPLYING TO GENERAL AND AQUATIC EFFECTS MONITORING

As stated previously, for the purpose of ensuring compliance with the licence or regulations, an Inspector designated by the Minister may inspect or examine works, waters or waste and exercise other powers according to the NWNSRTA.¹⁰⁶ For the purpose of monitoring, the Board may include conditions in its licence regarding monitoring programs to be undertaken.¹⁰⁷ The General and Aquatic Effects Monitoring includes Water Monitoring Program for monitoring of the Tailings Impoundment Area and all its inputs and output, the downstream aquatic environment at Doris Lake outlet and Doris Creek downstream of the Final Discharge Point from the TIA, including water quality and quantity. Acute Lethality Testing of the TIA effluent prior to and during release to Doris Creek. A Thermal Monitoring Program for monitoring of ground temperatures with respect to the water containment facilities (North and South Dams) and the underground workings near Doris Lake and the waste rock and Cyanide Leach Residue disposal areas.

PART K: CONDITIONS APPLYING TO GENERAL AND AQUATIC EFFECTS MONITORING PLANS

As stated previously, the MMER apply to this project. However, as indicated by EC the time scale contemplated by the national Environmental Effects Monitoring (EEM) program is not suitable for a potentially two-year mine life..¹⁰⁸

Section 73 of the NWNSRTA requires the Board to set conditions at least as stringent as conditions prescribed by regulation pursuant to subsection 36(5) of the *Fisheries Act*.¹⁰⁹ Given the limited time frame for the construction, operation and closure of this mine and the overall application of the MMER, the Board believes more stringent requirements are needed. Accordingly, the Board requires the Licensee to submit to the Board a plan for an AEMP that considers and appropriately modifies and advances the schedule and complies with the requirements of the MMER.¹¹⁰

MHBL has agreed to continue water quality monitoring and the Board requests that plans for effluent characterization and sub-lethal testing be undertaken in the first season of discharge as part of the AEMP.

¹⁰⁶ See sections 85 to 94 of the NWNSRTA.

¹⁰⁷ See paragraph 70 (1)(c) of the Act

¹⁰⁸ EC Written Submission at p. 5.

¹⁰⁹ Section 73 of the NWNSRTA states:

73 Where the Board issues a licence in respect of any waters to which regulations made under subsection 36(5) of the *Fisheries Act* apply, any conditions in the licence relating to the deposit of waste in those waters shall be at least as stringent as the conditions prescribed by those regulations.

¹¹⁰ EC Written submission pg. 6 states: The [AEMP] program should be compatible with the work required under the EEM program so as to avoid duplication.

In addition, for monitoring programs subsection 70(2) of the Act allows the Board to specify responsibilities of the applicant and Her Majesty in right of Canada (in this case EC).¹¹¹ Accordingly, to avoid duplication the Board directs MHBL and EC to coordinate with the NWB to ensure that the advanced submission of the AEMP meets the requirements of MMER.

PART L: CONDITIONS APPLYING TO ABANDONMENT, RECLAMATION AND CLOSURE

The Board requires MHBL to prepare an Interim and eventually a Final Closure and Reclamation Plan in accordance with the *Mine Site Reclamation Guidelines for the Northwest Territories, 2007*. The Interim Plan is required upon completion of the construction phase and commencement of milling operations and the Final Plan is required after approximately eighteen (18) months of operations and approximately six (6) months prior to proposed closure. The recommendations provided by the parties in their written submissions are contemplated within the Guidelines and therefore not specifically addressed as terms and conditions of the Licence unless otherwise stated in the Licence. The Board further encourages MHBL to consider all of the submissions that have been made with respect to abandonment, reclamation, and closure in preparation of both the interim and final closure plans.

SCHEDULES

Schedules provide instructive detail to the conditions appearing in more general terms in the main body of the Licence and are spelled out in this format for greater clarity. Except for Schedule A, the schedules provide specific requirements for Plans to be submitted to the Board.

¹¹¹ Subsection 70(2) of the NWNSRTA states:

70(2) The monitoring programs referred to in paragraph (1)(c) may specify responsibilities of the applicant, the Nunavut Impact Review Board or Her Majesty in right of Canada.

APPENDIX A – LIST OF SUBMISSIONS AND CORRESPONDENCE

Application

1. Cover letter and initial submission of application for Water Licence by Hope Bay Joint Venture (Miramar Hope Bay Ltd./Hope Bay Gold Corporation) dated March 20, 2002.

Initial Submissions & Correspondence

1. Letter to Philippe di Pizzo, Executive Director, Nunavut Water Board, dated March 20, 2002 Re: Application for Water Use Licence at Doris Hinge Project. Hugh R. Wilson, Manager Environmental Affairs, Hope Bay Joint Venture, Miramar Hope Bay Ltd. – Hope Bay Gold Corporation Inc.
2. E-mail to Philippe di Pizzo & Jack Kaniak dated March 20, 2002 Re: Doris Hinge Project-Preliminary Project Description. Hugh R. Wilson, Manager Environmental Affairs, Miramar Mining Corporation.
3. Letter to Hugh Wilson, Manager Environmental Affairs, Miramar Hope Bay Ltd.- Hope Bay Gold Corporation Inc. dated March 28, 2002 Re: Application Acknowledgement for the Doris Hinge Project. Rita Becker, Licensing Administrator, NWB.
4. Letter to Philippe di Pizzo, Executive Director, Nunavut Water Board, dated February 8, 2005 Re: Doris North Project. A. David Long, Vice President Legal, Miramar Mining Corporation.
5. Letter to Donald Haviyak, President, Kitikmeot Inuit Association dated September 22, 2006 Re: Doris North Project-Bonding Requirements for Project Reclamation. Anthony Walsh, President, Miramar Hope Bay Limited.
6. Water Licence Application Support Document dated October 2006.
7. Dated October 5, 2006 DRAFT Nunavut Water Board Preliminary Guidelines for Applicant Miramar Hope Bay Limited-Doris North Project.
8. Letter to Phyllis Beaulieu, Manager Licensing, NWB, dated October 13, 2006 Re: NWB 2AM-DOH-Miramar Hope Bay Ltd.-Doris North Gold Project Nunavut Water Board Guidelines for Applicant. Colette Spagnuolo, Environmental Assessment/Contaminated Sites Specialist, Environment Canada.
9. Letter to Phyllis Beaulieu, Manager Licensing, NWB, dated October 13, 2006 Re: Doris North Guidelines-NWB File 2AM-DOH. Michael Mifflin, Coordinator Land Use Planning Environmental Protection Services, Government of Nunavut Department of Environment.
10. Letter to Phyllis Beaulieu, Manager Licensing, NWB, dated October 13, 2006 Re: Doris North Project Nunavut Water Board Draft Guidelines. Carolyn Dunn, Environmental Assessment Coordinator, Health Canada.
11. Letter to Phyllis Beaulieu, Manager Licensing, NWB, dated October 13, 2006 Re: 2AM-DOH-Miramar Hope Bay Limited-Doris North Project-Nunavut Water Board Guidelines for Applicant. Jim Rogers, Manager of Water Resources, Indian & Northern Affairs Canada.

12. Letter to Phyllis Beaulieu, Manager Licensing, NWB, dated October 13, 2006 Re: NWB-Draft Guidelines for the Doris North Project. John Cowan, Environmental Officer, Transport Canada.
13. Memo to Phyllis Beaulieu, Manager Licensing, NWB, dated October 20, 2006 Re: Comments on Doris North Guidelines: 2AM-DOH. Geoffrey Clark, Director of Lands, Environment & Resources, Kitikmeot Inuit Association.
14. Dated October 27, 2006 Nunavut Water Board Preliminary Guidelines for Applicant Miramar Hope Bay Limited-Doris North Project.
15. Letter to Larry Connell, General Manager Environment, Miramar Mining Corporation dated October 30, 2006 Re: Preliminary Guidelines-Application for a Water Licence Doris North Gold Project. Philippe di Pizzo, Chief Administrative Officer, NWB.
16. Letter to Larry Connell, General Manager Environment, Miramar Mining Corporation dated November 9, 2006 Re: Preliminary Review-Application for a Water Licence Doris North Gold Project. Phyllis Beaulieu, Manager Licensing, NWB.
17. Submitted to the NWB November 7, 2006 CD titled Miramar Hope Bay Ltd.
18. Letter to Richard Dwyer, Licensing Trainee, NWB, dated November 30, 2006 Re: Miramar Hope Bay Ltd. Preliminary Review. Kevin Tweedle, Environmental Technician, Kitikmeot Inuit Association.
19. Letter to Richard Dwyer, Licensing Trainee, NWB, dated December 4, 2006 Re: Preliminary Review-Application for Water Licence Doris North Gold Project. Mike Atkinson, Manager Land Use Planning & Environmental Assessment, Government of Nunavut Department of Environment.
20. Letter to Phyllis Beaulieu, Manager Licensing, NWB, dated December 7, 2006 Re: NWB 2AM-DOH-Miramar Hope Bay Ltd.-Doris North Gold Project Water Licence Application-Completeness Review. Stephen Harbicht, Head EA North, Environment Canada.
21. Letter to Richard Dwyer, Licensing Trainee, NWB, dated December 8, 2006 Re: 2AM-DOH-Miramar Hope Bay Limited-Doris North Project-preliminary review. Carl McLean, Director of Operations, Indian & Northern Affairs Canada.
22. Letter to Phyllis Beaulieu, Manager Licensing, NWB, dated December 8, 2006 Re: Doris North Project Nunavut Water Board Application-Health Canada Review. Carolyn Dunn, Environmental Assessment Coordinator, Health Canada.
23. Letter to Phyllis Beaulieu, Manager Licensing, NWB, dated December 8, 2006 Re: Miramar Hope Bay Ltd., Doris North Project-Nunavut Water Board Application. John Cowan, Environmental Officer, Transport Canada.
24. Letter to Phyllis Beaulieu, Manager Licensing, NWB, dated December 11, 2006 Re: DFO completeness assessment of the Doris North Gold Project water licence application. Tania Gordanier, Habitat Management Biologist, Department of Fisheries and Oceans.
25. Letter to Larry Connell, General Manager Environment, Miramar Mining Corporation, dated December 27, 2006 Re: Additional Guidelines for the Doris North Water Licence Application. J. Murdock, Director of Technical Services, NWB.

26. Letter to Philippe di Pizzo, Executive Director, NWB, dated January 24, 2007 Re: Meeting Notes from January 3 & 4, 2007 meeting between NWB & MHL. Terri L. Maloof, Manager Environmental Auditing & Permitting, Miramar Hope Bay Limited.
27. Letter to Thomas Kabloona, Acting Chair, NWB, dated February 23, 2007 Re: Doris North Water Licence. Donald Haviyok, President, Kitikmeot Inuit Association.
28. Memo to the Nunavut Water Board Members dated March 1, 2007 Re: Doris North Project Kitikmeot Inuit Association. Richard Dwyer, Licensing Trainee, NWB.
29. Letter to Philippe di Pizzo Executive Director Nunavut Water Board dated March 14, 2007 Re: Doris North Project-Application for Water Licence, NWB File # NWB1DOR. A. David Long, Vice President Legal, Miramar Mining Corporation.
30. Submitted to the NWB by Miramar Hope Bay Ltd. dated April 2007 titled: Miramar Hope Bay Ltd. Revised Water Licence Application Support Document Doris North Project, Figure 2.1: Overall Site Infrastructure Layout.
31. Submitted to the NWB April 26, 2007 by LGL Limited Environmental Research Associates & Paul F. Wilkinson & Associates Inc. dated April 19, 2007 titled: Effluent & Aquatic Monitoring Study Design for Doris North Project, Nunavut, Canada: A Critical Review.
32. Memo to News North dated May 9, 2007 Re: Request to Place Ad for 2AM-DOH Doris North Project. Phyllis Beaulieu, Manager Licensing, NWB.
33. Memo to Nunatsiaq News dated May 9, 2007 Re: Request to Place Ad for 2AM-DOH Doris North Project. Phyllis Beaulieu, Manager Licensing, NWB.
34. Memo to Local Organizations dated May 9, 2007 Re: Notice of Public Hearing. Phyllis Beaulieu, Manager Licensing, NWB.
35. Letter to Larry Connell, General Manager Environment, Miramar Mining Corporation dated May 9, 2007 Re: Acknowledgement of resubmission of Application for Type "A" Water Licence for Doris North Project. Dionne Filiatrault, Acting Executive Director, NWB.
36. E-mail to Doris North Distribution dated May 10, 2007 Re: Acknowledgement of Resubmission of Application-Doris North Project-2AM-DOH & Notice of Public Hearing. Phyllis Beaulieu, Manager Licensing, NWB.
37. E-mail to Gary Ash, Consultant for Miramar, dated May 16, 2007 Re: Miramar Hope Bay Ltd.-Doris North NNLP. Paul Savoie, Fish Habitat Management Biologist, Department of Fisheries & Oceans.
38. Submitted to the NWB May 31, 2007 by Golder Associates Ltd. on behalf of Miramar Hope Bay Ltd. titled Doris North Project "No Net Loss" Plan.
39. Letter to Dionne Filiatrault, Acting Executive Director, NWB, dated June 5, 2007 Re: Doris North Project-Water Licence 2AM-DOH. Carl McLean, Director of Operations, Indian and Northern Affairs Canada.
40. Received by the NWB June 7, 2007, Review of Doris North Water Licence Application (NWB File # 2AM-DOH), GN-DOE.
41. E-mail to Phyllis Beaulieu, Manager Licensing, NWB, dated June 7, 2007 Re: Pre-Hearing Technical Meeting June 11-12, 2007-Doris North Project. Carolyn Dunn, Environmental Assessment Coordinator, Health Canada.

42. Letter to Phyllis Beaulieu, Manager Licensing, NWB, dated June 7, 2007 Re: DFO Intervention Comments to the Nunavut Water Board, Technical Meeting, Water Licence Application for the Doris North Project, Miramar Hope Bay Limited.
43. E-mail to Phyllis Beaulieu, Manager Licensing NWB, dated June 8, 2007 Re: Doris North-NWB Technical Meeting DFO Comments. Paul Savoie, Fish Habitat Management Biologist, Department of Fisheries & Oceans Canada.
44. E-mail to Dionne Filiatrault, Acting Executive Director NWB, dated June 8, 2007 Re: EC Pre-hearing Comments for the Doris North Project water licence application. Savanna Levenson, Environmental Assessment Specialist, Environment Canada.
45. Letter to Dionne Filiatrault, Acting Executive Director, NWB, dated June 8, 2007 Re: Doris North Project-Water Licence 2AM-DOH. Savanna Levenson, Environmental Assessment Specialist, Environment Canada.
46. Letter to Phyllis Beaulieu, Manager Licensing, NWB, dated June 8, 2007 Re: Doris North Water Licence Application-Project Modifications Arising from Ongoing Detailed Engineering. Larry Connell, General Manager Environment, Miramar Hope Bay Ltd.
47. Distributed to Doris North Distribution List, for June 11 & 12, 2007 Pre-Hearing Technical Meeting Agenda & Revised Agenda. Dionne Filiatrault, Acting Executive Director, NWB.
48. Received by the NWB June 11, 2007, INAC Initial Review of the Revised Water Licence Application Support Document for the Doris North Project for the NWB Technical Hearing, June 11/12, 2007.
49. Letter to Stephanie Briscoe, Executive Director, Nunavut Impact Review Board dated June 13, 2007 Re: Doris North Water Licence Application-Project Modifications Arising from Ongoing Detailed Engineering. Larry Connell, General Manager Environment, Miramar Hope Bay Ltd.
50. Letter to Leslie Payette, Manager Environmental Administration, Nunavut Impact Review Board dated June 21, 2007 Re: Doris North Gold Mine-Proposed Modification to the Project Proposal. Dionne Filiatrault, Acting Executive Director, NWB.
51. Memo to Doris North Distribution List dated June 21, 2007 Re: Pre-Hearing Conference for Miramar Hope Bay Ltd. Doris North Project application for a Type A Water Licence. Phyllis Beaulieu, Manager Licensing, NWB.
52. Letter to Phyllis Beaulieu, Manager Licensing, NWB dated June 28, 2007 Re: Doris North Water Licence Pre-Hearing Technical Meeting Information Supplement-New Material for Item #10 (Sewage Treatment Plant). Larry Connell, General Manager Environment, Miramar Hope Bay Ltd.
53. Letter to Larry Connell, General Manager, Miramar Hope Bay Ltd. dated June 29, 2007 Re: Authorization for the harmful alteration, disruption or destruction of fish habitat pursuant to subsection 35(2) of the Fisheries Act. Keith Pelley, Acting Area Director Eastern Arctic Area Department of Fisheries & Oceans Canada.
54. Memo to the NWB July 19, 2007 by Miramar Hope Bay Ltd. dated July 19, 2007 Re: Doris North Water Licence Pre-Hearing Technical Meeting Information Supplement Item #9-Cyanide Destruction. Larry Connell Miramar Hope Bay Ltd.

55. Submitted to the NWB July 19, 2007 by Miramar Hope Bay Ltd. dated July 2007 titled: Monitoring & Follow-up Plan Doris North Project, Nunavut.
56. Received by the NWB July 27, 2007, KIA, Intervention Submission titled: Final KIA NWB Doris North Submission – July.27.07, Tech Review for Revised Licence Application for Doris North Project.
57. Received by the NWB July 27, 2007, KIA, Intervention Submission titled: Final KIA NWB Doris North Submission – July.27.07, Tech Review for Revised Licence Application for Doris North Project Supporting Document.
58. Letter to Thomas Kabloona, Acting Chair, NWB, dated July 27, 2007 written submission in respect to the scheduled public hearings concerning Miramar Hope Bay Ltd. revised waster licence application, Environment Canada (EC) C. Baraniecki.
59. Received by the NWB July 27, 2007, Environment Canada, (EC) Mike Fournier, Intervention Submission dated August 2007 titled: Environment Canada's submission to the Nunavut Water Board for the Public Hearings on the Doris North Gold Mine Project revised water licence application submitted by Miramar Hop Bay Limited April 2007.
60. Submitted to the NWB July 30, 2007, Indian and Northern Affairs Canada (INAC) Intervention Submission dated July 30, 2007 titled: 2AM-DOH/Miramar Hope Bay Ltd./Doris North Project/Type A Licence Application/Indian and Northern Affairs Canada Intervention to August 13-15, 2007 Final Hearing.
61. Received by the NWB July 30, 2007, GN-DOE, Intervention Submission dated July 2007 titled: Review of Doris North Water Licence Application.
62. Received by the NWB July 30, 2007 Department of Fisheries and Oceans (DFO), Amy Liu, Intervention Submission date July 30, 2007 titled: Fisheries & Oceans Canada Intervention Comments Doris North Underground Cold Mine Project August 13, 2007.
63. Received by the NWB July 31, 2007 Nunavut Tunngavik Incorporated, George Hakongak, Presentation and Executive Summary
64. Memo to Doris North Distribution List dated August 2, 2007 Re: Presenter's Guidelines – Doris North Public Hearing. Phyllis Beaulieu Manager of Licensing, NWB.
65. Received by the NWB August 3, 2007 Inuktitut translation of intervention submission from KIA Geoff Clark.
66. Received by the NWB August 7, 2007 Inuinnaqtun translation intervention Submission from KIA Geoff Clark.
67. Received by the Nunavut Water Board (NWB) August 8, 2007 Intervention Presentation dated August 2007 from Government of Nunavut, Department of Environment (DOE), titled: The Doris North Water Licence Application, Public Hearing Government of Nunavut Department of Environment.
68. Received by the NWB August 9, 2007 e-mail from Larry Connell, Miramar Mining Corporation, Re: Information Request.
69. Received by the NWB August 9, 2007 e-mail from Geoff Clark, Kitikmeot Inuit Association (KIA), re: Doris North Project 2AM-DOH KIA Presentation-errata.
70. Received by the NWB August 10, 2007 Intervention Presentation dated August 2007 from Indian & Northern Affairs Canada, titled: Miramar Hope Bay Ltd.

- Doris North Project Nunavut Water Board Licence Application, Indian & Northern Affairs Presentation NWB Final Hearing Cambridge Bay, NU August 13-15, 2007.
71. Received by the NWB August 10, 2007 Intervention Presentation dated August 2007 from Fisheries & Oceans Canada, titled: Fisheries & Oceans Canada Fish Habitat Management Program, Intervention to the Nunavut Water Board on the Doris North Gold Project, Cambridge Bay, August 13-15, 2007.
 72. Memo to Larry Connell, General Manager Environment, Miramar Hope Bay Limited dated August 11, 2007 Re: Doris North Project-Doris Creek Discharge Location and Water Quality Monitoring Point. Maritz Rykaart, SRK Consulting Engineers & Scientists.
 73. Received by the NWB August 17, 2007 from Larry Connell, General Manager Environment, Miramar Hope Bay Limited, titled: Baseline information on pH of Tundra Standing Water-Map of Sample Locations.

APPENDIX B – LIST OF EXHIBITS FILED AT THE PUBLIC HEARING AUGUST 13 & 14, 2007

NO.	Name of Exhibit	Type of Exhibit	Submitted by:
1	Doris North Project Presentation to NWB - Doris North Public Hearing Cambridge Bay, NU. August 13, 2007^	Hard Copy	Miramar Hope Bay Limited – Larry Connell.
2	Doris North Project Presentation to NWB - Doris North Public Hearing Cambridge Bay, NU. August 13, 2007^	Electronic Copy	Miramar Hope Bay Limited – Larry Connell.
3	SRK Consulting Engineers and Scientists Memo Subject: Discharge Location and Water Quality Monitoring Plan	Hard Copy	Maritz Rykaart, SRK Consulting to Larry Connell, MHL.
4	Supplemental information in response to Intervener submissions.	Electronic copy	MHL – Larry Connell
5	Supplemental information in response to Intervener submissions	Hard Copy	MHL – Larry Connell
6	NTI/KIA Presentation for Miramar Hope Bay Ltd Doris North Project Water Licence Application – Presentation for NWB Public Hearing	Hard Copy	NTI/KIA – Geoff Clark
7	NTI/KIA Presentation for Miramar Hope Bay Ltd Doris North Project Water Licence Application – Presentation for NWB Public Hearing	Electronic Copy	NTI/KIA – Geoff Clark
8	INAC Presentation NWB Final Hearing, Cambridge Bay, NU August 13-15, 2007	Hard Copy	INAC-Carl McLean
9	INAC Presentation NWB Final Hearing, Cambridge Bay, NU August 13-15, 2007	Electronic Copy	INAC-Carl McLean
10	INAC Mine Site Reclamation Policy for Nunavut, 2002	Hard Copy	INAC-Carl McLean
11	Environment Canada's Intervention on Doris North Gold Project, August 13-15, 2007	Hard Copy	EC-Anne Wilson
12	EC Intervention on Doris North Gold Project, August 13-15, 2007	Electronic Copy	EC-Anne Wilson
13	Memo from EC Subject dated August 13, 2007: CCME Guidelines re: Effluent Quality Criteria	Hard Copy	EC-Anne Wilson

14	Water Licence sent to D. Livingstone INAC on May 20, 2005 by Mackenzie Valley Land and Water Board for Colomac Mine NWT.	Hard Copy	EC-Anne Wilson
15	Fisheries and Oceans Canada(DFO) Fish Habitat management Program – Intervention to the NWB on the Doris North Gold Project, August 13-14, 2007	Hard Copy	DFO-Tanya Gordanier
16	Fisheries and Oceans Canada(DFO) Fish Habitat management Program – Intervention to the NWB on the Doris North Gold Project, August 13-14, 2007	Electronic Copy	DFO-Tanya Gordanier
17	Letter December 20, 2006 from Ginny Flood to Shauna Sigurdson re: Designation of Tail Lake as a Tailings Impoundment Area (TIA) under the MMER with attached email dated Aug 10, 2007	Hard Copy	DFO-Tanya Gordanier
18	Draft General Fish-out Protocol for Lake to be Lost Due to Mining Developments, DFO	Hard Copy	DFO-Tanya Gordanier
19	Department of Environment, Government of Nunavut (GN, DOE) Presentation	Hard Copy	GN-DOE – Mike Atkinson
20	Department of Environment, Government of Nunavut (GN, DOE) Presentation	Electronic Copy	GN-DOE – Mike Atkinson
21	Modeling the Environment Fate of Dioxins and Furans Released to the Atmosphere During Incineration, CEMC Report No. 200701, Eva Webster and Don Mackay	Hard Copy	EC-Anne Wilson
22	Screening level risk assessment model for chemical fate and effects in the environment Supporting Information, RAIDAR-ES&T Supporting Information (es0514085) J. Arnot, Don Mackay, Eva Webster	Hard Copy	EC-Anne Wilson
23	Screening Level Risk Assessment Model for Chemical Fate and Effects in the Environments, Environ. Sci. Technol. 2006, 40, 2316-2323, J. Arnot, D. Mackay and E. Webster.	Hard Copy	EC-Anne Wilson

24	Package response to Exhibit 5 from KIA/NTI; INAC,	Hard Copy	KIA/NTI, EC and INAC
25	Final Reply from MHL on the hearing	Electronic Copy	MHL-Larry Connell