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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYIT
OFFICE DES EAUX DU NUNAVUT

File No.: **2BB-BOS1217**

August 7, 2012

Mr. Chris Hanks
Hope Bay Mining Ltd.
300-889 Harbourside Drive
North Vancouver, BC V7P 3S1
Email: chris.hanks@newmont.com

RE: Licence 2BB-BOS1217

Dear Mr. Hanks,

Please find attached Licence No. **2BB-BOS1217** issued to Hope Bay Mining Ltd. (HBML) by the Nunavut Water Board pursuant to its authority under Article 13 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*. The terms and conditions of the attached Licence related to water use and waste disposal are an integral part of this approval.

If the Licensee contemplates the renewal of this Licence, it is the responsibility of the Licensee to apply to the NWB for its renewal. The past performance of the Licensee, new documentation and information, and issues raised during a public hearing, if the NWB is required to hold one, will be used to determine the terms and conditions of the Licence renewal. Note that if the Licence expires before the NWB issues a new one, then water use and waste disposal must cease, or the Licensee will be in contravention of the Nunavut Land Claims Agreement. However, the expiry or cancellation of a licence does not relieve the holder from any obligations imposed by the licence. The NWB recommends that an application for the renewal of this Licence be filed at least three months prior to the Licence expiry date.

If the Licensee contemplates or requires an amendment to this licence, the NWB may decide, in the public interest, to hold a public hearing. The Licensee should submit applications for amendment as soon as possible to give the NWB sufficient time to go through the amendment process. The process and timing may vary depending on the scope of the amendment, however a minimum of thirty (30) days is required from the time of acceptance by the NWB. It is the responsibility of the Licensee to ensure that all application materials have been received and acknowledged by the Manager of Licensing.

The NWB strongly recommends that the Licensee consult the comments received by interested

persons on issues identified. Comments were received from Aboriginal Affairs and Northern Development Canada and Environment Canada. All comments are attached for your consideration.

The NWB notes that HBML has provided a notification of Care and Maintenance on January 31, 2012, and through a further email received on July 31, 2012, HBML has confirmed that activities currently taking place at the Boston Advanced Exploration Project do not involve water use, waste generation and disposal at Boston from pumping of sumps, ponds or the decline and that the Boston Camp is not in operation at the present time. As such, the NWB does not consider the activities presently taking place involving the movement of historic geologic diamond drill core from areas of concern around Spyder Lake and Stickleback Lake, the monitoring of fuel security or compliance monitoring and sampling as activities that cannot continue during a short interim period of the Licence expiry on July 31, 2012 and the issuance of the renewal Licence, effective August 2, 2012.

Sincerely,

A handwritten signature in dark ink, appearing to read 'T. Kabloona', with a stylized flourish at the end.

Thomas Kabloona
Nunavut Water Board, Chair

TK/dh/pb

Enclosure: Licence No. 2BB-BOS1217
 Comments AANDC, EC

cc: Distribution List Kitikmeot

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DECISION

LICENCE NUMBER: 2BB-BOS1217

This is the decision of the Nunavut Water Board (NWB) with respect to an application for a renewal of a Water Licence dated March 13, 2012 made by:

HOPE BAY MINING LIMITED

to allow for the use of water and disposal of waste during mineral exploration activities consisting of prospecting, diamond and reverse circulation drilling, on-site core splitting and logging, operation of a bulk sampling crushing and sorting plant, a camp, domestic use of water, treatment and disposal of greywater and sewage, fuel storage, operation of a landfarm facility for hydrocarbon contaminated soil, environmental baseline data collection, further underground development and underground exploration drilling, the collection of a bulk sample obtained from split drill core and drill cuttings, the handling and storage of waste rock and ore on existing pads and potential future bulk sampling. These activities will be undertaken at the Boston site of the Hope Bay Project located within the Kitikmeot Region, Nunavut generally located at the geographical coordinates as follows:

Latitude: 67° 39'N Longitude: 106° 22'W (existing Boston camp location)

DECISION

In accordance with S.55.1 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSRTA) and Article 13 of the *NLCA*, public notice of the application was given and interested persons were invited to make representations to the NWB.

After reviewing the submission of the Applicant and considering the representations made by interested persons, the NWB, having given due regard to the facts and circumstances, the merits of the submissions made to it and to the purpose, scope and intent of the *NLCA* and of the *NWNSRTA*, waived the requirement to hold a public hearing, and determined that:

Licence Number 2BB-BOS0712 be renewed as Licence Number 2BB-BOS1217 subject to the terms and conditions contained therein. (Motion #: 2012-03-L10)

SIGNED this 2nd day of August, 2012 at Gjoa Haven, NU.



Thomas Kabloona
Nunavut Water Board, Chair

TK/dh/pb

LICENCE NUMBER: 2BB-BOS1217

BACKGROUND

A renewal application was submitted on April 26, 2007 by Miramar Hope Bay Limited (MHBL) for the Boston Advanced Exploration Project. The preceding licence was issued by the NWB on October 5, 2001 (NWB1BOS0106) which had superseded a Licence issued to BHP Diamonds Ltd. initially as N7L2-1552 by the NWT Water Board and subsequently amended as NWB1BOS9801 by the Nunavut Water Board. The 2001 application was subject to a pre-hearing conference and written hearing. The resulting licence covered domestic water use and waste disposal and associated activities, prospecting, continued surface drilling, core-splitting and logging on site, underground drilling, operation of the bulk sample plant, environmental baseline data collection, demobilization of equipment and potentially future underground bulk sampling. The licence issued in 2001 expired December 31, 2006.

On March 6, 2002, the NWB issued an amendment to licence NWB1BOS0106 to incorporate the conditions, from licence NWB4WEI0002, related to the operation and removal of a v-notch weir to record the outflow from Stickleback Lake.

The 2007 renewal application included prospecting, continued surface diamond and reverse circulation exploration drilling, on-site core splitting and logging, operation of a bulk sampling crushing and sorting plant, operation of an exploration accommodation camp and domestic water use, treatment and disposal of sewage and greywater, fuel storage, operation of a hydrocarbon landfarm, proposed on-site solid waste landfill, environmental baseline data collection, further underground development for exploration drilling and collection of small 1-kg samples for metallurgical testing, a crushing and sorting plant, stockpiling of waste rock and ore and potential future bulk sampling. A brief summary is provided below:

Previous Licensee – BHP Minerals Canada Ltd.	N7L2-1552 Boston Gold Project
BHP Diamonds Ltd. – Amendment Application	May 27, 1999 NWB1BOS9801
Assignment From BHP Diamonds Ltd. to Cambiex Exploration Inc. and Miramar Hope Bay Ltd.	May 31, 2000 NWB1BOS9801
Renewal Application – Hope Bay Joint Venture (HBJV)	October 5, 2001 - NWB1BOS0106 for Boston Gold Project
Amendment Application – Hope Bay Joint Venture (HBJV)	March 6, 2002 - combine and incorporate conditions from Licence NWB4WEI0002
Renewal Application - Miramar Hope Bay Ltd.	April 26, 2007 – Renewal application. Licence issued as 2BB-BOS0712
Assignment Application - From Miramar Northern Mining Limited to Hope Bay Mining Ltd.	January 23, 2008 2BB-BOS0712

CURRENT APPLICATION

The current application for renewal of Licence No. 2BB-BOS0712 (Application) was submitted by Hope Bay Mining Ltd. on March 13, 2012. In the application filed, no changes were requested to the scope of the project. The Application included the following information:

- Cover letter dated March 13, 2012 re: 2BB-BOS0712 – Renewal Application
- Renewal Application Form
- Renewal Application Summary
- Renewal Application Map
- Renewal Application Financial Statement 2011 Annual Report
- Renewal Application Compliance Status-IMLE

Other documents that have been received under the term of the previous licence and taken into consideration during the review of the renewal Application include:

- Sewage Treatment Plant Operations and Maintenance Plan for Boston Camp, FSC Architects and Engineers, July 2010;
- Boston Land Treatment Area Management and Monitoring Plan, SRK Consulting (Canada) Inc., January 2012;
- Hope Bay Mining Limited, Quality Assurance and Quality Control Plan, In Compliance with Boston Type B Water Use Licence 2BB-BOS0712, ESR Hope Bay Mining Limited, February 2009;
- Hope Bay Project, Spill Contingency Plan, SRK Consulting (Canada) Inc., August 2011;
- Hope Bay Project, Boston Camp Revised Interim Closure Plan, SRK Consulting (Canada) Inc., August 2011

Additional documents that were provided and referenced with respect to the Application are:

- Hope Bay Mining Limited, Hazardous Waste Management Plan, March 2012
- Hope Bay Mining Limited, Non-Hazardous Waste Management Plan, March 2012;
- Hope Bay Mining Limited, Incinerator Management Plan, March 2012 , and
- Hope Bay Emergency Response Plan, Hope Bay Mining Limited – February 2012

The Application was distributed for a thirty day technical review on April 10, 2012. The deadline for technical submissions to the NWB was extended from May 10, 2012 to May 25, 2012. Comments were received from Environment Canada (EC), May 25, 2012 and Aboriginal Affairs and Northern Development Canada (AANDC), June 4, 2012.

ISSUES

The following section outlines the issues raised by interested parties and provides the background on the terms and conditions imposed within the body of the Licence.

Term of Licence

Licence 2BB-BOS0712 was issued for a period of 5 years based on the application received for renewal in 2007. The current Application for renewal of Licence 2BB-BOS0712 included a request for a licence term of 10 years as noted in the cover letter dated March 13, 2012:

The terms and conditions of the current Water Licence have been well accepted and complied with. Accordingly, HBML is requesting a 10 year term for its Water Licence, on the current approved terms.

During the technical review period, submissions were received from AANDC and EC. AANDC expressed concerns with the request for a 10 year licence term noting that:

Until such time that AANDC is confident that this project is adequately secured through this water licence and land-use authorizations (i.e., security requirements set by the Kitikmeot Inuit Association), a 10 year renewal is deemed to be too long. A longer term can be issued once an updated financial security estimate has been processed and the licence security is brought up to date.

Following the submission by AANDC, the NWB received on July 13, 2012 from HBML under Part I, Item 1 and 4 of Licence 2BB-BOS0712, the submission of a revised abandonment and restoration plan with accompanying preliminary restoration liability estimate "*Hope Bay Project, Boston Camp Revised Interim Closure Plan*". Appendix B of this revised plan comprises a Boston Camp Closure Cost Estimate. Due to the timing of submission of this Plan, and the urgency of the renewal with respect to the Licence expiry and continued activity at the site, the submitted Plan is to undergo a technical review, separate from the review for the licence renewal. This review will commence following an initial internal technical review by the NWB technical staff.

HBML provided a response on July 26, 2012 to the concerns raised within the submissions and the comments received from AANDC and EC. In the response, HBML indicated that:

As discussed below in Issue 2, HBML has submitted a revised Abandonment and Reclamation Plan for Boston Camp. Furthermore, as discussed below in Issue 3, HBML is preparing, and will be submitting, an updated statement of financial security for Boston Camp. In light of these factors, we believe a ten year renewal request to be appropriate.

As AANDC has noted, and HBML confirmed, an updated estimate of restoration liability has not been provided for some time, in fact, an updated estimate has not been provided since the renewal application submitted and security set in the 2001 licence renewal. The update(s) have not been provided despite the requirement in subsequent licences to provide these updates, and specifically in the renewal licence issued in 2007, which stated under the security section of the Decision:

As part of the water licence, and considering the new activities on-site and progress made on the Project, the NWB requires that the Licensee provide an updated estimate of current Boston site restoration liability as part of the annual report required in Part B,

Item 7 of the Licence.

Having taken into consideration the request of the Applicant, the concerns raised through the technical review of the Application and the specific non-compliance with respect to providing an updated restoration liability estimate as required under the Licence, the Board has considered the reduced licence term as recommended by AANDC, the Board has determined that, given the circumstances detailed above, a licence term of 5 years is appropriate. The term is of sufficient length to allow HBML consideration of the direction that the Boston Advance Exploration Project will take, in the overall development of the Hope Bay Project, as well as provide the Board with some assurance of compliance to Licence terms and conditions prior to further renewal of the water licence.

Security

The NWB notes that the amount set for security in 2001 was \$1.7 million and this amount was carried over to the 2BB-BOS0712 Licence in the 2007 review. The KIA had commented¹ in 2007, that it will re-assess reclamation security for Miramar Hope Bay Limited activities in the Hope Bay Belt area. To date, the KIA has not provided this information to the Board and it is noted that no comments were received during the current renewal process.

To re-iterate in the 2007 renewal of Licence NWB1BOS0106, as part of the water licence, considering the newer activities on-site and progress made on the Project, the NWB required that the Licensee provide an updated estimate of the current Boston site restoration liability as part of the Annual Report required in Part B, Item 7(xiii) of the Licence. This requirement of the Annual Report read as follows:

An updated estimate of the current Boston restoration liability based upon the results of the restoration research, project development monitoring, and any modifications to the site plan

In addition to Part B, Item 7(xiii), Part B, Item 5 reads:

Notwithstanding Part B, Item 2, the Licensee shall provide such further or other amounts as may be required by the Board based on annual assessment of current restoration liability.

A review of the 2007 Annual Report determined that under Item 14, HBML indicated “No reclamation liability study of Boston was done in 2007.” A further review of the Annual Reports that followed in subsequent years, including the 2011 Annual Report, determined that the Licensee has not provided the update to the restoration liability estimate as required under Part B, Item 7(xiii) of the Licence.

In consideration of Part B, Item 7 (xiii), Part B, Item 5 above, the Board has not required or made adjustments to the security requirements during the previous licence term as the initial

¹ Letter KIA to Richard Dwyer, Licensing Administrator, re: Miramar Hope Bay Ltd. – Boston Project – Type B Water Licence Renewal, June 7, 2007

assessment by the Licensee was not completed² as determined within the Licence Decision for 2BB-BOS0712 and no further annual assessments have been provided. In addition, the Board has not received an indication from the KIA that a re-assessment has been completed and that consideration of further security under Part B, Item 5 is required.

During the technical review of the application and submissions received based on review, the NWB notes that, with respect to financial security, Aboriginal Affairs and Northern Development (AANDC) submitted that:

Considering that HBML did not provide this information, their application is arguably incomplete. Furthermore, it should be noted that since HBML are moving their project into a Care and Maintenance Phase, it would be prudent for this information to be provided.

HBML's current application for renewal referenced the application submitted in 2007, to provide the financial security information. The NWB is in agreement with AANDC, that the current application lacks up-to-date, detailed estimates to assess the amount of reclamation security to be posted, given the current care and maintenance status of the Project, from that of active exploration. HBML provided a response on July 26, 2012 to the submissions received from AANDC and EC, which included an update to the status of the Abandonment and Reclamation Plan as well as that for a site restoration liability estimate for the project under Licence No. 2BB-BOS0712. With respect to the restoration liability estimate, HBML responded:

Our assumption is that a term of the new licence will require us to provide a revised security estimate in 60 to 90 days after the renewal is granted. This will allow us make sure that the requirements of the renewed licence do not alter our calculations before we submit it to the NWB, AANDC, and the KIA.

The Board agrees fully with AANDC in the requirement to provide the updated restoration liability estimate and has considered HBML's commitment within the letter of July 26, 2012 to provide this information within 60-90 days after the renewal is granted, as determined by the Board. In providing this information as a condition of the Licence, and taking into account all conditions of the Licence, HBML will be able to provide the Board with a comprehensive closure plan and restoration liability estimate, to be reviewed by all interested parties during the initial months of the renewed licence term. Until such time as the Parties can review an updated estimate the NWB does not support changes to security at this time but expects that the forthcoming review will discuss the proposed split of restoration security between land and water and any other issues as defined by the Parties. The requirement to provide an updated restoration liability estimate is found under Part B, Item 3 of the Licence.

² Licence No. 2BB-BOS0712, pg 1 (pg 4 of pdf) stated:

The NWB notes that the amount set for security in 2001 was \$1.7 million. KIA commented that following water licence renewal it will re-assess reclamation security. As part of the water licence, and considering the new activities on-site and progress made on the Project, the NWB requires that the Licensee provide an updated estimate of current Boston site restoration liability as part of the annual report required in Part B, Item 7 of the Licence.

While not having been raised by any party, the Board has removed from the renewed licence the requirement that security be posted, payable to the joint payees of INAC (as it then was) and the Kitikmeot Inuit Association, as was previously included in the licenses for the Boston Advanced Exploration Project. Since the time when this condition was included in the original licences, the Board has had the benefit of extensive written submissions with respect to the Board's jurisdiction to require security to be posted for the benefit of joint payees, during public hearings into other Type A licenses from Indian Affairs and Northern Development (INAC, now Aboriginal Affairs and Northern Development Canada or AANDC), the Kitikmeot Inuit Association and the Minister.

In the resulting decisions associated with those licenses³, the Board recognized that under s. 76(1) of the Nunavut Waters and Nunavut Surface Rights Tribunal Act, security must be furnished and maintained with the Minister and that the acceptable form of security is to be determined by the Minister. Further, the Board accepted the Minister's position that these provisions do not support the Minister holding security jointly with another party. Consequently, the Board no longer includes a condition requiring the licensee to provide security to the Minister jointly with another party. Recognizing these developments in the Board's approach to the manner in which security should be held, and consistent with the reasons given in the noted decisions, the Board has removed the condition that required the security to name as joint payees, the Minister and the Kitikmeot Inuit Association and the condition now requires that the security posted under the licence be provided to the Minister only.

The Board would like to remind the Licensee, that failure to comply with any condition of the Licence is a violation of the *Act* and may be subject to enforcement action.

Water Use

The Licensee did not request any change to either the amount of water to be used under this Licence nor to the water sources as identified within the Licence and previous application. These remain unchanged to reflect the volume of water for camp and exploration activities proposed to be used by the Licensee. Total water use for the project is set at 100 m³/day.

Waste Disposal

General

In order to insure proper function of the earthworks the Board requires that a Geotechnical Engineer inspect the site annually during the summer and provide a report with recommendations to the NWB. The report must also contain a cover letter from the Licensee outlining a plan to address the Geotechnical Engineer's recommendations. This requirement is detailed under Part D, Item 17.

³See Record of Proceeding/Reasons for Decision for 2AM-DOH0713, Doris North Project, September 19, 2007 and Record of Proceeding/Reasons for Decision for 2AM-MEA0815, Meadowbank Gold Project, June 9, 2008

Containment Areas

Based on the potential for contaminants to be released from the waste rock and ore stockpiles into water via surface drainage, the Board requires that a Geotechnical Engineer inspect the adequacy of containment ponds to ensure that there is no seepage into the surrounding area. The Board also has maintained the containment pond discharge parameters from the previous licence.

Sewage Disposal Facility, Sewage Treatment Operation and Maintenance Manual and Sewage Sludge Alternatives

The Licensee was required under Licence 2BB-BOS0712, to submit to the Board for approval, an Operations and Maintenance (O&M) Manual for the Sewage Disposal Facility (SDF) under Part E, Item 5. Several submissions have been received by the Board within the term of the Licence, including:

- Boston Advanced Exploration Project, Operation and Maintenance Manual for the Wastewater Treatment Facility, Hope Bay Mining Ltd., Hope Bay, Nunavut, Canada; SRK Consulting Engineers and Scientists, April 2009;
- Sewage Treatment Plant, Operation and Maintenance Plan for the Boston Camp v1.3, FSC Architects and Engineers, July 2010; and
- Sewage Treatment Plant, Operation and Maintenance Plan for the Boston Camp v1.4, FSC Architects and Engineers, October 2010.

In addition to the above operations manual, the Board was in receipt of the following document with respect to requirements under Part D, Item 13 as follows:

- Sewage Sludge Management Alternatives for the Hope Bay Project, v1.0, FSC Architects and Engineers, June 2010.

The above Sewage Treatment Plant Operation and Maintenance Plan and accompanying Sewage Sludge Management Alternatives for the Hope Bay Project were distributed for review to interested persons and, upon receiving comments on the submissions, the NWB approved the two Plans on October 12, 2010 with a requirement to submit revisions to the Plans by October 31, 2010. As indicated above, the revisions were received by October 31, 2010 and an acceptance letter was issued by the NWB on January 18, 2011 indicating that the revised Plans had adequately addressed the concerns of the approval letter from October 12, 2010.

These Plans are to be reviewed annually and updated accordingly, should changes in operations or technology warrant such changes. This requirement is included under Part B, Item 14. Specifically, a requirement to provide a revised Sewage Treatment Plant O&M Plan prior to change of operational status from care and maintenance, back to operations, is required under Part E, Item 6.

Effluent discharge criteria for the Sewage Disposal Facility are included in the Licence under Part D, Item 15 and remain consistent with the previous licence.

Landfarm Facility

A Landfarm Operation and Maintenance Plan was required to be submitted under the previous Licence 2BB-BOS0712, Part E, Item 7. The Licensee originally provided a plan on November 15, 2007 entitled “*Landfarm Operations and Maintenance Manual For Boston Camp Landfarm Treatment Area and Windy Lake Camp Landfarm Treatment Area, October 2007.*” This manual was distributed for technical review on December 18, 2007. A submission was received from Indian and Northern Affairs Canada (INAC) on December 28, 2008.

An additional information request was made by the NWB on August 5, 2008 to which HBML responded on September 5, 2008. In the response, HBML provided explanation on the history of the Landfarm, its initial design considerations and the previous requirements of the licence in effect at the time. The letter also provided the background to the inability to provide construction design drawings and as built drawings for the Landfarm at the Boston Project and the future plans to decommission the facility. The NWB responded with a letter on October 7, 2008 discussing the current operations of the Landfarm, the O&M Plan on file with the NWB and the requirement to submit an Abandonment and Restoration Plan specific to the Landfarm decommissioning and closure. Further correspondence was received from HBML that provided an update on the submission timing of a Landfarm specific closure plan.

Upon review of the Annual Reports submitted during the current term of the Licence, there has been no indication of the Landfarm being closed and remediation completed. The Annual Report for 2011 indicated that soils remain in the Landfarm and continued sampling would take place in 2012. There were no discharges from the facility in 2011.

On January 12, 2012, HBML provided the document entitled “*Boston Land Treatment Area Management and Monitoring Plan, SRK Consulting (Canada) Inc., January 2012*”. This document was distributed for information to interested persons on May 24, 2012 and no comments were received to date. An internal review has been carried out with the Application documents and determined that the Plan is acceptable under Part E, Item 7 and approved with the issuance of this Licence. It is recommended and included in the conditions of the Licence, that the Licensee carry out an annual review of the Plan and take into consideration the references from Environment Canada, which include:

- Federal Guidelines for Landfarming Petroleum Hydrocarbon Contaminated Soils. SAIC Canada (Science Applications International Corporation), December 2005
- Bioremediation of Petroleum Hydrocarbons in Soil and Groundwater Under Cold Climate Conditions: A Review, Implications for Applications in Canada , Dale Van Stempvoort and Pamela Grande, National Water Research Institute in Burlington, December 2005
- Cold Climate Bioremediation: A Review of Field Case Histories. Pamela Rogers, Research Assistant, Department of Civil & Environmental Engineering, University of Alberta, July 2005

Parameters set for wastewater discharges at the Landfarm and Bulk Fuel Storage Facility have been set in accordance with CCME guidelines. In the absence of a CCME guideline for Oil and

Grease, the NWB has included a discharge parameter for Oil and Grease, being consistent with similar requirements in other licenses.

The Licensee is required to review this Plan as required under Part B, Item 14.

Solid Waste Disposal

Through the review of the information provided, the NWB has determined that currently, all solid wastes not incinerated on site or at the Doris facility, are being packaged and stored for shipment off site to an approved facility. HBML submitted the “*Hope Bay Mining Limited, Non-Hazardous Waste Management Plan, Rev 1.1, March 2012*”. Section 12.5 of the Plan, describes the materials to be diverted to the waste management area for backhaul and off-site management.

The preceding licence scope included the provision for a solid waste landfill within the project components, however, the current correspondence and discussions have indicated that activity at the Boston site are being scaled down. With the development of the Doris Project, the needs at Boston have been reduced and will be accommodated through use of the Doris camp and associated facilities in the foreseeable future. With this in mind, the conditions with respect to the previously proposed landfill have been removed from the renewed licence and should the Licensee determine a need in the future, an amendment application will be required to proceed.

Water and Ore/Waste Rock Management Plan

Ore and waste rock were generated as part of a 1996/1997 BHP Billiton underground exploration program at the Boston deposit. A total of 105,400 tonnes of waste rock and 26,760 tonnes of ore were mined and brought to surface. The waste rock was used to construct a camp pad, roads, and an airstrip at the Boston site. Ore was placed in stockpiles on the camp pad. As a condition of Water Licence 2BB BOS0712 (Part E, Item 8), Hope Bay Mining Ltd. (HBML) was required to develop a water and ore/waste rock management plan that addressed the ARD and metal leaching potential of the materials at the site (NWB 2007).

HBML submitted the “*Water and Ore/Waste Rock Management Plan for the Boston Site, Hope Bay Project, Nunavut, SRK Consulting Engineers and Scientists, July 2009*”, which was received on August 17, 2009. This Plan was distributed for technical review to interested persons on August 20, 2009. Submissions were received from Indian and Northern Affairs Canada (INAC) on September 25, 2009 and Environment Canada (EC) on September 21, 2009.

Following the submission of the Plan and receipt of comments, HBML submitted on July 16, 2010, a cover letter and Technical Memo (addendum to the Plan), prepared by SRK Consulting, to address the geochemical characterization of the fuel tank berm at Boston, a structure that had not been sampled in preparation of the Plan submitted. In addition to the Technical Memo, HBML submitted a response dated October 20, 2010, that addressed concerns expressed by INAC and EC with respect to the Plan submitted on August 17, 2009.

The additional information provided on the Plan was distributed for comment on October 14,

2010 and submissions were received from INAC on November 17, 2010 and EC on November 18, 2010. Following review of these submissions, an approval letter was issued by the NWB on January 19, 2011. The approval included a requirement to:

“...provide an additional addendum to the Plan to address the measures required for collecting runoff and seepage from the pads, as required by the Licence. The addendum shall also propose a comprehensive set of Effluent discharge criteria for the Containment Pond addressing parameters of potential concern.”

The supplemental information requested by the NWB was to be provided for review and approval by April 1, 2011. A technical memo was issued by HBML, prepared by SRK Consulting, dated April 4, 2011 that addressed the “Ephemeral Streams at Boston Camp”.

It is recommended that the Plan be reviewed and revised, taking into account the additional information that has been submitted as addendums and the clarification information provided through correspondence from HBML. The requirement for review and update is included under Part B, Item 14 of the Licence.

OTHER

V-Notch Weir

Conditions related to the construction, operation and removal of the v-notch weir to monitor outflow from Stickleback Lake were included as part of the previous two water licences under NWB1BOS0106-Amendment No.1. These conditions have been carried forward to this renewal as the Licensee has not provided any further information as to the status of the structure. The requirement to provide a status update is included within the Annual Reporting requirements of Part B, Item 8.

Environmental Management

Spill Contingency Plan (SCP)

HBML submitted a SCP, “Spill Contingency Plan, Hope Bay, Nunavut, Canada, SRK Consulting, September 2009” as a requirement of Licence 2BB-BOS0712. This Plan was distributed for review and comments to interested persons on November 30, 2009. Comments were received from INAC on December 14, 2009, EC on December 15, 2009 and the Government of Nunavut on January 2010. The NWB reviewed all submissions on the SCP and on January 6, 2010 provided a review letter and approval to HBML indicating the deficiencies of the Plan and items required to be addressed in a revised Plan.

A Revised SCP was submitted by HBML on March 29, 2010 based on the review and addressed the concerns and issues raised. A further review of the Plan determined that minor corrections remained to be addressed, regarding an update to contact information.

HBML submitted an updated SCP on April 12, 2012, “*Hope Bay Project, Spill Contingency Plan, SRK Consulting, August 2011*”. The Plan has been submitted as a comprehensive plan

for the Hope Bay Project which includes the Doris Camp, Boston Camp and Windy Camp. Currently the Plan addresses the fact that the Windy Camp is currently under care and maintenance. Under Licence condition Part H, Item 1, the Licensee is required to update the Plan to address the current status of the Project and that all activities are being suspended, moving into a state of care and maintenance for the Hope Bay Project.

Abandonment and Restoration Plan (A&R)

A closure and reclamation plan was submitted by Miramar Hope Bay Ltd. (MHBL) on September 14, 2007 entitled “*Closure and Reclamation Plan, for the Boston Advanced Exploration Project, Nunavut*”, prepared by Lawrence J. Connell, Miramar Mining Corporation, September 2007 (Plan). This Plan was distributed on October 1, 2007 to interested persons for review and comment, with a deadline for submissions of October 31, 2007. On December 18, 2007, the NWB issued a letter of approval to MHBL indicating acceptance of the Plan.

During the technical review of the current application, AANDC had provided a submission which included concerns raised with respect to the requirement for an abandonment and restoration plan and the required updated restoration liability estimate, both being conditions of the effective licence. AANDC noted in their submission:

...Given that this licence was assigned to HBML from Miramar Northern Mining Ltd. (formerly Miramar Hope Bay Ltd.) on January 23, 2008, AANDC believes that this plan should be revised to reflect HBML management plans.

Further, AANDC recommended that:

...HBML submit a revised Abandonment and Reclamation Plan that reflects their plans to manage this project.

The Board agrees with comments provided by AANDC and as such, requires that the Plan be revised and submitted within sixty (60) days of the issuance of this Licence, for approval of the Board in writing. This requirement is included under Part I, Item 1.

The Board notes at this time, that HBML has submitted a fully revised abandonment and restoration plan, “*Hope Bay Project, Boston Camp Revised Interim Closure Plan, SRK Consulting (Canada) Inc., June 2012*” which has been received by the Manager of Licensing on July 13, 2012 and will be distributed for technical review and comment following an internal technical review.

Quality Assurance Quality Control Plan (QAQC Plan)

The requirement to submit a Quality Assurance Quality Control (QAQC Plan) is to provide the necessary checks and controls under the Licence for sampling, monitoring and reporting for HBML’s Boston Advanced Exploration Project. These procedures are generally developed from literature and guidelines and are intended to promote good practices in environmental

management.

The QAQC Plan submitted under Licence 2BB-BOS0712 was first developed and reviewed in 2001 with subsequent revisions during the two licence terms. The most recent revision that has been submitted to the NWB is the plan “*Hope Bay Mining Ltd., Quality Assurance and Quality Control Plan, In Compliance with Boston Type B Water Use Licence 2BB-BOS0712, ESR Hope Bay Mining Ltd., February 2009*”. The Plan was approved by an analyst on July 13, 2009.

Although HBML has indicated in the letter of January 31, 2012 on the Notification of Care and Maintenance, that all development and surface exploration within the Hope Bay Project area is postponed until further notice, there are still activities, including monitoring, required on site to maintain compliance with the current Licences. This was later confirmed in a letter to the NWB, dated March 1, 2012 indicating that monitoring and ensuring the sustainability of all environmental activities would be maintained. This would be later formalized in detailed care and maintenance plans for the Hope Bay Project area licences, expected to be submitted in June, 2012 (not received at the time of issuance of this Licence).

As monitoring and other environmental activities will continue during the Care and Maintenance period, the NWB has included a requirement under Part J, Item 15, to update the current QAQC Plan and provide the Plan to the Board for review, along with a letter of approval from the Analyst, within three (3) months of issuance of the Licence.

Other Applicable Legislation

The Licensee is directed to the written submissions received during the public review period for this Application for renewal, specifically to the comments received from Aboriginal Affairs and Northern Development Canada and Environment Canada.

Environment Canada reminds the Applicant that the Fisheries Act, Section 36(3) requires that all wastes discharged to water be demonstrated to be non-toxic.

The Licensee is also reminded that compliance with the terms and conditions of this Licence does not absolve the Licensee from the responsibility for compliance with the requirements of all other applicable Federal, Territorial and Municipal legislation.

LICENCE 2BB-BOS1217

Pursuant to the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*, the Nunavut Water Board, hereinafter referred to as the Board, hereby grants to

HOPE BAY MINING LTD.

(Licensee)

of

300-889 HARBOURSIDE DRIVE, NORTH VANCOUVER, BC, V7P 3S1

(Mailing Address)

hereinafter called the Licensee, the right to alter, divert or otherwise use water and/or dispose of waste for a period subject to restrictions and conditions contained within this Licence:

2BB-BOS1217

Licence Number

NUNAVUT 07

Water Management Area

BOSTON ADVANCED EXPLORATION PROJECT

Location

WATER USE AND WASTE DISPOSAL

Purpose

MINING AND MILLING – TYPE “B”

Classification of Undertaking

ONE HUNDRED (100) CUBIC METRES PER DAY

Quantity of Water Not to Exceed

AUGUST 2, 2012

Date of Licence

JULY 31, 2017

Expiry Date of Licence

Dated this 2nd day of August, 2012 at Gjoa Haven, NU.



Thomas Kabloona

Nunavut Water Board
Chair

PART A: SCOPE, DEFINITIONS AND ENFORCEMENT

1. Scope

This Licence allows for the use of water and the disposal of waste for an undertaking classified as Mining and Milling as per Schedule II of the Regulations for the Boston Advanced Exploration Project, located approximately 250 km southwest of Cambridge Bay within the Kitikmeot Region, Nunavut.

General Project Coordinates

Max Latitude 67° 41' 41" N and Min. Latitude 67° 36' 13"W

Max Longitude 106° 26' 27" N and Min. Longitude 106° 19' 21"W

Boston Camp (2012) Latitude 67° 39' 32"N and Longitude 106° 23' 17"W

- a. This Licence is issued subject to the conditions contained herein with respect to the taking of water and the depositing of waste of any type in any waters or in any place under any conditions where such waste or any other waste that results from the deposits of such waste may enter any waters. Whenever new Regulations are made or existing *Regulations* are amended by the Governor in Council under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, or other statutes imposing more stringent conditions relating to the quantity or type of waste that may be so deposited or under which any such waste may be so deposited, this Licence shall be deemed, upon promulgation of such Regulations, to be subject to such requirements; and;
- b. Compliance with the terms and conditions of this Licence does not absolve the Licensee from responsibility for compliance with the requirements of all applicable Federal, Territorial and Municipal legislation.

2. Definitions

“Act” means the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*;

“Addendum” means the supplemental text that is added to a full plan or report usually included at the end of the document and is not intended to require a full resubmission of the revised report.

“Amendment” means a change to original terms and conditions of this Licence requiring correction, addition or deletion of specific terms and conditions of the Licence; modifications inconsistent with the terms of the set terms and conditions of the Licence;

“Analyst” means an Analyst designated by the Minister under Section 85 (1) of the *Act*;

“**Appurtenant Undertaking**” means an undertaking in relation to which a use of water or a deposit of waste is permitted by a licence issued by the Board;

“**Board**” means the Nunavut Water Board established under the *Nunavut Land Claims Agreement* and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*;

“**Bulk Fuel Storage Facility**” means the fuel storage facility as described in the Renewal Application and supporting documents dated December 1, 2006.

“**Engineer**” means a professional engineer registered to practice in Nunavut in accordance with the *Consolidation of Engineers and Geoscientists Act S. Nu 2008, c.2* and the *Engineering and Geoscience Professions Act S.N.W.T. 2006, c.16 Amended by S.N.W.T. 2009, c.12*;

“**Greywater**” means all liquid wastes from showers, baths, sinks, kitchens and domestic washing facilities, but does not include toilet wastes;

“**High Water Mark**” means the usual or average level to which a body of water rises at its highest point and remains for sufficient time so as to change the characteristics of the land (ref. Department of Fisheries and Oceans Canada, Operational Statement: Mineral Exploration Activities);

“**ICP Scan**” means the laboratory method for determining trace metals in water through Emission Spectroscopy using inductively coupled plasma (including up to approximately 32 elements depending on the laboratory performing the analysis);

“**Inspector**” means an Inspector designated by the Minister under Section 85 (1) of the *Act*;

“**Landfarm**” means the storage facility as described in the Renewal Application and supporting documents (Landfarm questionnaire) submitted March 12, 2007, designed for the treatment of hydrocarbon contaminated soils;

“**Licensee**” means the holder of this Licence;

“**Minewater**” means groundwater or any water used in mining, which is pumped or flows out of any underground workings or open pit;

“**Modification**” means an alteration to a physical work that introduces a new structure or eliminates an existing structure and does not alter the purpose or function of the work, but does not include an expansion;

“**Nunavut Land Claims Agreement**” (NLCA) means the “*Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada*”, including its preamble and schedules, and any amendments to that agreement made pursuant to it;

“Regulations” means the *Northwest Territories Water Regulations* sor/93-303 8th June, 1993, omitting Section 5, Water Use or Waste Deposit without a Licence;

“Sewage” means all toilet wastes and greywater;

“Sewage Disposal Facility” comprises the area and engineered structures designed to contain and treat Sewage (i.e. Rotating Biological Contactor or as otherwise proposed and reviewed by the Board);

“Sludge” means accumulated and concentrated solids removed from the Waste Water Treatment Facility;

“Solid Waste” means garbage, refuse, or other discarded material resulting from operating the undertaking, excluding sewage sludge, commercial, industrial or hazardous waste.

“Spill Contingency Plan” means a Plan developed to deal with unforeseen petroleum and hazardous materials events that may occur during the operations conducted under the Licence;

“Sump” means an excavation in impermeable soil for the purpose of catching or storing water or waste;

“Toilet Wastes” means all human excreta and associated products, but does not include greywater;

“Waste” means, as defined in S.4 of the *Act*, any substance that, by itself or in combination with other substances found in water, would have the effect of altering the quality of any water to which the substance is added to an extent that is detrimental to its use by people or by any animal, fish or plant, or any water that would have that effect because of the quantity or concentration of the substances contained in it or because it has been treated or changed, by heat or other means.

3. Enforcement

- a. Failure to comply with this Licence will be a violation of the *Act*, subjecting the Licensee to the enforcement measures and the penalties provided for in the *Act*;
- b. All inspection and enforcement services regarding this Licence will be provided by Inspectors appointed under the *Act*; and
- c. For the purpose of enforcing this Licence and with respect to the use of water and deposit or discharge of waste by the Licensee, Inspectors appointed under the *Act*, hold all powers, privileges and protections that are conferred upon them by the *Act* or by other applicable law.

PART B: GENERAL CONDITIONS

1. The water use fees, payable to the Receiver General for Canada, shall be sent to the Board annually in advance of any use in accordance with Section 9 of the *Regulations*.
2. The Licensee shall furnish and maintain with the Minister, in the form that is satisfactory to the Minister, a security deposit in the amount of \$1.7 million dollars.
3. The Licensee shall provide to the Board for assessment and approval in writing, within sixty (60) days of issuance of this Licence, a revised and updated restoration liability estimate for closure of the Boston Advanced Exploration Project, based on the NWB's Guide 4 and Guide 7⁴, and using a recognized methodology such as RECLAIM® for preparing the estimate.
4. Notwithstanding Part B, Item 2, the Licensee shall provide such further or other amounts as may be required by the Board based on annual assessment of current restoration liability.
5. The security deposit shall be maintained until such time as the Minister is satisfied that the Licensee has complied with all provisions of the approved Abandonment and Restoration Plan. This clause shall survive the expiry of this Licence or renewals thereof.
6. The Licensee shall file an Annual Report on the appurtenant undertaking with the Board no later than March 31st of the year following the calendar year being reported which shall contain the following information:
 - a. the monthly and annual quantities in cubic metres of all freshwater obtained from Aimaoktatuk (Spyder) Lake at Monitoring Station BOS-1;
 - b. the monthly and annual quantities in cubic metres of Minewater pumped from the underground;
 - c. the monthly and annual quantities in cubic metres of treated Minewater and surface drainage discharged at Monitoring Station Number BOS-2;
 - d. the monthly and annual quantities in cubic metres of treated Sewage effluent discharged at Monitoring Station Number BOS-3;
 - e. the monthly and annual quantities in cubic metres of Sludge removed from the Sewage Disposal Facility;
 - f. the annual quantities in cubic metres of all soil and types of contaminants from all locations that are placed within the Landfarm facility;
 - g. report all artesian flow occurrences as identified under Part F, Item 3;
 - h. report all drilling activity that has penetrated below the permafrost as identified under Part F, Item 4;
 - i. tabular summaries of all data generated under the Monitoring Program;
 - j. a summary of modification and/or major maintenance work carried out on the

⁴ NWB Guide 4 – Completing and Submitting a Water Licence Application for a New Licence and NWB Guide 7 – Licence Requirements Following the Issuance of a Water Licence.

- Water Supply and the Waste Disposal Facilities, including all associated structures, and an outline of any work anticipated for the next year;
 - k. a list of unauthorized discharges and follow-up action taken;
 - l. updates or revisions to the Abandonment and Restoration Plan, QA/QC, Waste Rock and Ore Storage Plan, Spill Contingency Plan, and Landfarm Plan;
 - m. a brief description of follow-up action taken to address concerns detailed in inspection and compliance reports prepared by the Inspector;
 - n. a summary of drilling activities and progressive reclamation of drill sites;
 - o. An updated estimate of the current Boston restoration liability based upon the results of the restoration research, project development monitoring, and any modifications to the site plan;
 - p. an estimate of both the current and anticipated volume of waste rock and ore stockpiled on site;
 - q. a public consultation/participation report describing consultation with local organizations and residents of the nearby communities, if any were conducted;
 - r. a summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year;
 - s. an update on the status of the v-notch weir located at Stickleback Lake, an item transferred through the amalgamation of Licence NWB4WEI0002 with 2BB-BOS0106 (now the current Licence) and addressed through Part E; Item 9;
 - t. a summary of any specific studies or reports requested by the Board, and a brief description of any future studies planned or proposed; and
 - u. any other details on Water use or Waste disposal requested by the Board by November 1st of the year being reported.
7. The Licensee shall notify the NWB of any changes in operating plans or conditions associated with this project at least thirty (30) days prior to any such change.
 8. The Licensee shall install flow meters or other such devices, or implement suitable methods required for the measuring of water volumes as required under Part J.
 9. The Licensee shall post signs in the appropriate areas to inform the public of the location of the Water Supply Facility and the Waste Disposal Facility. All signs shall be located and maintained to the satisfaction of an Inspector.
 10. The Licensee shall, for all Plans submitted under this Licence, include a proposed timetable for implementation. Plans submitted, cannot be undertaken without subsequent written Board approval and direction. The Board may alter or modify a Plan if necessary to achieve the legislative objectives and will notify the Licensee in writing of acceptance, rejection or alteration of the Plan.
 11. The Licensee shall, for all Plans submitted under this Licence, implement the Plan as approved by the Board in writing.
 12. The Licensee shall review the Plans referred to in this Licence, as required by changes in operation and/or technology, and modify the Plan accordingly. Revisions to the Plans

shall be submitted in the form of an Addendum to be included with the Annual Report.

13. 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 conditions 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.
14. Licensee shall ensure a copy of this Licence is maintained at the site of operations at all times. Any communication with respect to this Licence shall be made in writing to the attention of:

a) Manager of Licensing:

Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0
Telephone: (867) 360-6338
Fax: (867) 360-6369
Email: licensing@nunavutwaterboard.org

b) Inspector Contact:

Water Resources Officer, INAC
Nunavut District, Nunavut Region
P.O. Box 100
Iqaluit, NU X0A 0H0
Telephone: (867) 975-4295
Fax: (867) 979-6445

15. The Licensee shall submit one paper copy and one electronic copy of all reports, studies, and plans to the Board. Reports or studies submitted to the Board by the Licensee shall include a detailed executive summary in Inuktitut.
16. The Licensee shall ensure that any document(s) or correspondence submitted by the Licensee to the Board is received and acknowledged by the Manager of Licensing.
17. This Licence is not assignable except as provided in Section 44 of the *Act*.

PART C: CONDITIONS APPLYING TO WATER USE

1. The Licensee shall obtain all water for domestic camp use from Aimaoktatuk (Spyder) Lake at SNP Station BOS-1 using the Water Supply Facility or as otherwise approved by the Board. Water use for drilling and associated uses shall be obtained from Aimaoktatuk Lake, Stickleback Lake or as required from sources proximal to the drilling targets. The total volume of water for the purposes of this Licence, from all sources shall not exceed 100 cubic meters per day.

2. Streams cannot be used as a water source unless authorized and approved by the Board.
3. If the Licensee requires water in sufficient volume that the source water body may be drawn down the Licensee shall, at least thirty (30) days prior to commencement of use of water, submit to the Board for approval in writing, information on the water body that includes, but is not limited to: volume of water required, hydrological overview of the water body, details of impacts, and proposed mitigation measures.
4. The Licensee shall equip all water intake hoses with a screen of an appropriate mesh size to ensure that fish are not entrained and shall withdraw water at a rate such that fish do not become impinged on the screen.
5. The Licensee shall not remove any material from below the ordinary high water mark of any water body unless otherwise approved by the Board in writing.
6. The Licensee shall not cause erosion to the banks of any body of water and shall provide necessary controls to prevent such erosion.
7. Sediment and erosion control measures shall be implemented prior to and maintained during the operation to prevent entry of sediment into water.

PART D: CONDITIONS APPLYING TO WASTE DISPOSAL

1. The Licensee shall locate areas designated for waste disposal, at a minimum distance of thirty one (31) metres from the ordinary high water mark of any water body such that the quality, quantity or flow of water is not impaired, unless otherwise authorized by the Board.
2. The Licensee shall not practice open burning or on-site land filling of domestic waste, unless otherwise approved by the Board in writing.
3. The Licensee is authorized to dispose of all acceptable food waste, paper waste and untreated wood products in an incinerator.
4. The Licensee shall not open burn plastics, wood treated with preservatives, electric wire, Styrofoam, asbestos or painted wood to prevent the deposition of waste materials of incomplete combustion and/or leachate from contaminated ash residual, from impacting any surrounding waters, unless otherwise approved by the Board in writing.
5. The Licensee shall provide to the Board, documented authorization from the receiving community, prior to the backhauling of any non-hazardous waste for disposal at that community.
6. The Licensee shall backhaul and dispose of all hazardous wastes, waste oil and non-combustible waste generated through the course of the operation at an approved waste

disposal site.

7. The Licensee shall maintain records of all waste backhauled and records of confirmation of proper disposal of backhauled waste. These records shall be made available to an Inspector upon request.
8. All Minewater and surface drainage from decline, waste rock and ore stockpiles shall be pumped to a Containment Pond prior to discharge.
9. All discharge from Containment Pond at Monitoring Station BOS-2 shall not exceed the following Effluent quality limits:

Parameter	Maximum Average Concentration (mg/L)	Maximum Concentration of any Grab Sample (mg/L)
Total Arsenic	0.5	1.00
Total Copper	0.30	0.60
Total Lead	0.20	0.40
Total Nickel	0.50	1.00
Total Zinc	0.50	1.00
Total Suspended Solids	25	50
Oil and Grease	No visible sheen	No visible sheen
pH	6.0-9.5	6.0-9.5

10. The Licensee shall design and berm the Containment Ponds to prevent seepage. A report on seepage shall be included as part of the Geotechnical Engineer's annual report required by Part D, Item 17.
11. Licensee shall direct all sewage and greywater to the Sewage Disposal Facility unless otherwise approved by the Board.
12. The Licensee shall dispose of sludge removed from the Sewage Disposal Facility in a sump located a minimum of ~~thirty (30)~~ thirty-one (31) meters from the normal high water mark and such that they do not enter any water body, or as otherwise approved by the Board in writing under Part D, Item 13.
13. The Board has approved the document entitled "Sewage Sludge Management Alternatives for the Hope Bay Project Ver. 1.0, June 2010". Should alternative methods of disposal and treatment of Sludge be considered, the Licensee shall submit to the Board for approval in writing, at least four (4) months prior to the change in Sludge disposal plans, a revised plan which shall address:
 - a. Method of disposal;
 - b. Location of disposal area, if applicable;
 - c. Quantities and composition of sludge;
 - d. Mitigation measures to control run-off and restrict access;
 - e. A program for water quality monitoring;

- f. An implementation schedule; and
 - g. An executive summary of the proposal in English and Inuktitut.
14. The Licensee shall discharge all Effluent in such a manner to prevent surface erosion.
15. All Effluent being discharged from the Sewage Disposal Facility, monitoring station BOS-3 shall meet the following Effluent quality standards:

Parameter	Maximum Allowable Grab Sample Concentration
BOD ₅	80 mg/L
Total Suspended Solids	100 mg/L
Fecal Coliforms	10,000 CFU/100mL
Oil and grease	No visible sheen
pH	6.0-9.5

16. The Licensee shall ensure that effluent discharged from monitoring stations BOS-2 and BOS-3, is demonstrated to be non-acutely toxic in accordance with Part J, Item 3.
17. An inspection of the earthworks, geological regime, and the hydrological regime of the Project is to be carried out annually during the summer by a Geotechnical Engineer. The Geotechnical Engineer's report shall be submitted to the Board within sixty (60) days of the inspection, with a covering letter from the Licensee outlining an implementation plan to respond to the Engineer's recommendations.
18. The Licensee shall provide at least ten (10) days written notice to the Inspector prior to any planned discharges from the Bulk Fuel Storage Facility and the Landfarm at Monitoring Program Stations BOS-5 and BOS-6. This notice shall include the volume proposed for discharge and location, or intended use of effluent that meets the discharge criteria listed in Part D, Item 19.
19. All effluent from the Bulk Fuel Storage Facility and the Landfarm, at monitoring stations BOS-5 and BOS-6 respectively, shall meet the following Effluent quality standards:

Parameter	Maximum Allowable Grab Sample Concentration (ug/L)
Benzene	370
Toluene	2
Ethylbenzene	90
Lead	1
Oil & Grease	15.0 15,000 and no visible sheen

20. The Licensee shall establish and confirm compliance with Effluent quality limits of Part D, Item 19 prior to discharge.

21. All discharges shall be released in such a manner to minimize surface erosion. Upon confirming compliance required of Part D, Item 19, water to be released to the environment may be used for other industrial purposes upon written request to the Board, including use for dust suppression activities on roads and quarries as well as drilling.
22. In the event that Effluent planned for discharge exceeds the limits provided in Part D, Item 15 or Item 19, the Licensee shall investigate the cause of the noted exceedance and report any findings, along with planned mitigation measures to meet these limits, prior to any discharge.
23. The proponent shall ensure that any hazardous materials, including waste oil, receive proper treatment and disposal at an approved treatment facility.
24. The Licensee shall maintain all constructed facilities, including the Sewage Disposal Facility, Landfarm, Bulk Fuel Storage Facility and the Containment Pond(s), to the satisfaction of an Inspector.

PART E: CONDITIONS FOR CAMPS, ACCESS INFRASTRUCTURES AND OPERATIONS

1. The Licensee shall not erect camps or store material on the surface of frozen streams or lakes including immediate banks except what is for immediate use. Camps shall be located such as to minimize impacts on surface drainage.
2. All activities shall be conducted in such a way as to minimize impacts on surface drainage and the Licensee shall immediately undertake any corrective measures in the event of any impacts on surface drainage.
3. Winter lake and stream crossings, including ice bridges, shall be constructed entirely of water, ice or snow. The Licensee should minimize disturbance by locating ice bridges in an area that requires the minimum approach grading and the shortest crossing route. Stream crossings shall be removed or the ice notched prior to spring break-up.
4. With respect to access road, pad construction or other earthworks, the deposition of debris or sediment into or onto any water body is prohibited. These materials shall be disposed at a distance of at least thirty one (31) metres from the ordinary high water mark in such a fashion that they do not enter the water.
5. The Licensee submitted the document entitled "*Sewage Treatment Plant Operation and Maintenance Plan for the Boston Camp, July 27, 2010*". This Plan has been approved by the Board.
6. The Licensee shall submit to the Board for approval in writing, sixty (60) days prior to resuming exploration and commissioning of the Sewage Disposal Facility, a revised

Operation and Maintenance Manual, required in Part E, Item 5, prepared in accordance with the “*Guidelines for the Preparation of an Operation and Maintenance Manual for Sewage and Solid Waste Disposal Facilities in the Northwest Territories; 1996*” and adapted for the use of a mechanical sewage treatment facility.

7. The Licensee submitted the document entitled “*Boston Land Treatment Area Management and Monitoring Plan, SRK Consulting (Canada) Inc., January 2012.*” The Board has approved the plan as submitted. This Plan is to be reviewed and updated annually if required, as per Part B, Item 14.
8. The Licensee has submitted the document entitled “Water and Ore/Waste Rock Management Plan for the Boston Site, Hope Bay Project, Nunavut; SRK Consulting, July 2009.” The Board has approved the Plan along with the additional information submitted as addendums to the Plan. This Plan is to be reviewed and updated annually if required, as per Part B, Item 14.
9. The Licensee shall undertake the following measures during the construction/operation/removal of the v-notch weir at the outflow of Stickleback Lake, to minimize disturbance to the creek channel and receiving waters:
 - a. Timing of weir removal is to be done during the low flow period;
 - b. Storage of all extraneous sand bags and scrap materials away from the watercourse during the duration of the weir operation;
 - c. At the end of the flow data collection period, the cross section of the creek channel shall be restored as close as possible to original conditions;
 - d. Removal of naturally occurring material from the bed or bank of the creek below ordinary high water mark is prohibited;
 - e. All sites affected by the placement or removal of the weir shall be stabilized and suitable erosion control measures shall be implemented to minimize sediment into the creek;
 - f. Emplacement of the sandbag material shall be done such that the stream channel is not significantly obstructed during the spring freshet;
 - g. Materials used shall be clean and contaminant free;
 - h. The deposition of debris or sediment into any waterbody is prohibited. The materials shall be disposed of above the high water mark in such a fashion that they do not enter water; and
 - i. Stream flow shall not be altered in any way as a result of the operation.

PART F: CONDITIONS APPLYING TO DRILLING OPERATIONS

1. The Licensee shall not conduct any land based drilling within thirty one (31) metres of the ordinary high water mark of any water body, unless otherwise approved by the Board in writing.

2. The Licensee shall ensure that all drill waste, including water, chips, muds and salts (CaCl_2) in any quantity or concentration from land-based and on-ice drilling, shall be disposed of in a properly constructed sump or an appropriate natural depression located at a distance of at least thirty one (31) metres from the ordinary high water mark of any adjacent water body, where direct flow into a water body is not possible and no additional impacts are created.
3. If artesian flow is encountered, drill holes shall be immediately sealed and permanently capped to prevent induced contamination of groundwater or salinization of surface waters. The Licensee shall report all artesian flow occurrences within the Annual Report, including the location (GPS coordinates) and dates.
4. Where drilling activity has penetrated below the permafrost layer, the NWB requests that the proponent record the depth of permafrost and location of the drill hole, to be included within the Annual Report.
5. Drilling additives or mud shall not be used in connection with holes drilled through lake ice unless they are re-circulated or contained such that they do not enter the water, or are demonstrated to be non-toxic.
6. For “on-ice” drilling where drill additives are not being used, return water released must be nontoxic, and not result in an increase in total suspended solids in the immediate receiving waters above the Canadian Council of Ministers for the Environment, Guidelines for the Protection of Freshwater Aquatic Life (i.e. 10mg/L for lakes with background levels under 100 mg/L, or 10% for those above 100mg/L).
7. The Licensee shall establish water quality conditions prior to and upon completion of any drilling program through lake ice.

PART G: CONDITIONS APPLYING TO MODIFICATIONS

1. The Licensee may, without written consent from the Board, carry out Modifications to the Water Supply Facilities, Bulk Fuel Storage Facilities and Waste Disposal Facilities provided that such Modifications are consistent with the terms of this Licence and the following requirements are met:
 - a. the Licensee has notified the Board in writing of such proposed Modifications at least sixty (60) days prior to beginning the Modifications;
 - b. such Modifications do not place the Licensee in contravention of the Licence or the *Act*;
 - c. the Board has not, during the sixty (60) days following notification of the proposed Modifications, informed the Licensee that review of the proposal will require more than sixty (60) days; and
 - d. the Board has not rejected the proposed Modifications.

2. Modifications for which all of the conditions referred to in Part G, Item 1 have not been met can be carried out only with written approval from the Board.
3. The Licensee shall provide as-built plans and drawings of the Modifications referred to in this Licence within ninety (90) days of completion of the Modification. These plans and drawings shall be stamped by an Engineer.

PART H: CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING

1. The Licensee shall submit to the Board for approval, within sixty (60) days of issuance of the Licence, an update to the Spill Contingency Plan, submitted April 12, 2012, to address the current status of the Boston Advanced Exploration Project and all activity being suspended, moving into a state of care and maintenance for the Hope Bay Project. This Plan is to be prepared in accordance with the Spill Contingency Planning and Reporting Regulations developed under Section 34 of the Environmental Protection Act.
2. Licensee shall submit to the Board for approval in writing, sixty (60) days prior to the resumption of exploration activity at the Hope Bay Regional Exploration Project, a revised Spill Contingency Plan that is specific to the scope of this Licence and prepared in accordance with the *Spill Contingency Planning and Reporting Regulations* developed under Section 34 of the *Environmental Protection Act*.
3. The Licensee shall, if not approved by the Board, revise the Plan referred to in Part H, Item 1, and resubmit to the Board for approval within thirty (30) days of receiving notification of the Board's decision.
4. The Licensee shall ensure that any chemicals, petroleum products or wastes associated with the project do not enter water. All sumps and fuel caches shall be located at a distance of at least thirty one (31) metres from the ordinary high water mark of any adjacent water body and inspected on a regular basis.
5. The Licensee shall ensure that any equipment maintenance and servicing be conducted only in designated areas and shall implement special procedures (such as the use of drip pans) to manage motor fluids and other waste and contain potential spills.
6. If during the term of this Licence, an unauthorized discharge of waste occurs, or if such a discharge is foreseeable, the Licensee shall:
 - a. Employ the Spill Contingency Plan;
 - b. Report the spill immediately to the 24-Hour Spill Line at (867) 920-8130 and to the Inspector at (867) 975-4295; and
 - c. For each spill occurrence, submit to the Inspector, no later than thirty (30) days after initially reporting the event, a detailed report that will include the amount and type of spilled product, the GPS location of the spill, and the measures taken to contain and clean up the spill site.

PART I: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION OR TEMPORARY CLOSING

1. The Licensee shall submit to the Board for approval in writing, within sixty (60) days of issuance of this Licence, a revised Abandonment and Reclamation Plan that is specific to the scope of this Licence and prepared in accordance with the Mine Site Reclamation Guidelines for the Northwest Territories (INAC), 2006 and consistent with the INAC Mine Site Reclamation Policy for Nunavut, 2002.
2. The Licensee shall complete all restoration work prior to the expiry of this Licence.
3. The Licensee shall carry out progressive reclamation of any components of the project no longer required for the Licensee's operations.
4. The Licensee shall backfill and restore to the satisfaction of an Inspector, all sumps to the pre-existing natural contours of the land.
5. The Licensee shall remove from the site, all infrastructure and site material, including but not limited to, all fuel caches, drums, barrels, buildings and contents, docks, water pumps and lines, material and equipment before the expiry of this Licence.
6. The Licensee shall re-grade all roads and airstrip, if any, to match the natural contour to reduce erosion.
7. Licensee shall remove any culverts and restore the drainage to match the natural channel. Measures shall be implemented to minimize erosion and sedimentation.
8. The Licensee shall, for all disturbed surfaces, in order to promote growth of vegetation and the needed microclimate for seed deposition, prepare the areas by ripping, grading, or scarifying the surface to conform to the natural topography.
9. The Licensee shall reclaim areas that have been contaminated by hydrocarbons from normal fuel transfer procedures to meet objectives as outlined in the Government of Nunavut's Environmental Guideline for Site Remediation, 2010. The use of reclaimed soils for the purpose of back fill or general site grading may be carried out only upon consultation and approval by the Government of Nunavut, Department of Environment and an Inspector.
10. The Licensee shall restore drill holes and disturbed areas to natural conditions immediately upon completion of the drilling. The reclamation of drill holes must include the removal of any drill casing materials and, if having encountered artesian flow, the capping of holes with a permanent seal, as referred to under Part F, Item 3.
11. The Licensee may store drill core produced by the appurtenant undertaking in an appropriate manner and location at least thirty one (31) metres above the ordinary high water mark of any adjacent water body, where any direct flow into a water body is not possible and no additional impacts are created, or as directed by an Inspector.

12. All disturbed areas shall be contoured and stabilized upon completion of work and restored to a pre-disturbed state.

PART J: CONDITIONS APPLYING TO THE MONITORING PROGRAM

1. The Licensee shall maintain Monitoring Program Stations at the following locations:

New Monitoring Program Station Number	Description	Status	Old Monitoring Station Number
BOS-1	Raw water supply intake at Spyder Lake	Active (Volume cubic metres)	1652-1a
BOS-2	Containment Pond discharge	Active	1652-2
BOS-3	Sewage Disposal Facility final discharge	Active	1652-3
BOS-4	Treated sewage effluent point prior to entry into Aimaoktatuk (Spyder) Lake	Active	1652-4
BOS-5	Effluent from the Bulk Fuel Storage Facility prior to release to a location approved by an Inspector	Active	n/a
BOS-6	Effluent from the Landfarm Treatment Facility prior to release	Active	n/a
BOS-7	Landfill leachate	Not Active	n/a
BOS-8	Waste Rock and Ore Storage Pad	Active	n/a

2. The Licensee shall measure and record, in cubic metres, the daily quantities of water used for Camp, drilling and for all other purposes from all sources.
3. The Licensee shall measure and record, in cubic metres, the monthly and annual quantities in cubic metres of Minewater pumped from the underground.
4. The Licensee shall measure and record, in cubic metres, the monthly and annual quantities in cubic metres of Sludge removed from the Sewage Disposal Facility.
5. The Licensee shall measure and record, in cubic metres, the daily quantities of effluent discharged at Monitoring Program Stations BOS-2, BOS-3, BOS-5 and BOS-6.
6. The Licensee shall provide the GPS co-ordinates (in degrees, minutes and seconds of latitude and longitude) of all locations where sources of water are utilized for all purposes.

7. The Licensee shall determine the GPS co-ordinates (in degrees, minutes and seconds of latitude and longitude) of all locations where wastes associated with camp operations and drilling operations are deposited.
8. The Licensee shall sample at Monitoring Program Station BOS-2, once prior to discharge and weekly thereafter for parameters under Part D, Item 9.
9. The Licensee shall sample at Monitoring Program Stations BOS-3 and BOS-4 monthly during discharge. Samples shall be analyzed for the following parameters:

Biochemical Oxygen Demand – BOD ₅	Fecal Coliforms
Total Suspended Solids	pH
Oil and Grease	(visual)

10. The Licensee shall conduct toxicity testing on treated Sewage Disposal Facility Effluent at the point prior to entry into Aimaoktatuk (Spyder) Lake, Monitoring Station BOS-4, once annually during open water season in accordance with the following test procedures:
 - a. Acute lethality to Rainbow Trout, *Oncorhynchus mykiss* (as per Environment Canada's Environmental Protection Series Biological Test Method EPS/1/RM/13); and
 - b. Acute lethality to the crustacean, *Daphnia magna* (as per Environment Canada's Environmental Protection Series Biological Test Method EPS/1/RM/14).
11. The Licensee shall sample at Monitoring Program Stations BOS-5 and BOS-6 monthly during removal of water from the facilities and analyzed for the following:

TPH (Total Petroleum Hydrocarbons)	
PAH (Polycyclic Aromatic Hydrocarbons)	
BTEX (Benzene, Toluene, Ethylbenzene, Xylene)	
pH	Electrical Conductivity
Nitrate-Nitrite	Oil and Grease (analysis and visual)
Total Phenols	Total Alkalinity
Total Hardness	Calcium
Magnesium	Potassium
Sodium	Sulphate
Total Arsenic	Total Cadmium
Total Copper	Total Chromium
Total Iron	Total Lead
Total Mercury	Total Nickel

12. The Licensee shall utilize opportunistic sampling of seepage and runoff from the existing waste rock/ore storage locations, identified as monitoring station BOS-8, to be carried out initially during spring thaw, and at a minimum, monthly when flow is

observed. These monitoring results are to be compared with previously reported kinetic testing results from the ARD Characterization Data Base, for the Boston Deposit.

13. The Licensee shall analyze samples obtained under Part J, Item 12 in accordance with similar test methods as those used in previous kinetic testing for, at a minimum, the following parameters:
 - pH
 - Sulphate
 - Electrical Conductivity
 - Total Suspended Solids
 - Total Ammonia, and
 - Total Trace Metals as determined by a standard ICP Scan (to include at a minimum, the following elements: Al, Sb, Ba, Be, Cd, Cr, Co, Cu, Fe, Pb, Li, Mn, Mo, Ni, Se, Sn, Sr, Tl, Ti, U, V, Zn),
14. The Licensee shall obtain representative samples of the water column below any ice where required under Part F, Item 7. Monitoring shall include but not be limited to the following:
 - Total Suspended Solids
 - pH
 - Electrical Conductivity, and
 - Total Trace Metals as determined by a standard ICP Scan (to include at a minimum, the following elements: Al, Sb, Ba, Be, Cd, Cr, Co, Cu, Fe, Pb, Li, Mn, Mo, Ni, Se, Sn, Sr, Tl, Ti, U, V, Zn), and Trace Arsenic and Mercury
15. The Licensee shall submit to an analyst for approval, within three (3) months of the issuance of the Licence, a revised Quality Assurance and Quality Control Plan. The plan shall include analysis of field blanks and certified reference material, and replicate sampling in order to assess accuracy, precision and field contamination.
16. The Licensee shall annually review the approved Quality Assurance/Quality Control plan of Part J, Item 15 and modify it as necessary. Proposed modifications shall be submitted to an Analyst for approval.
17. All sampling, sample preservation and analyses shall be conducted in accordance with methods prescribed in the current edition of Standard Methods for the Examination of Water and Wastewater, or by such other methods approved by the Board.
18. All analyses shall be performed in a laboratory accredited according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.
19. An Inspector may impose additional monitoring requirements.
20. A Monitoring Program monthly summary report shall be submitted to the Board for review, within thirty (30) days following the month being reported. This summary shall include, at a minimum, the monitoring results of Part J.

21. The Licensee shall include in the Annual Report required under Part B, Item 2, all data, monitoring results and information required by this Part.
22. The Monitoring Program and compliance dates specified in the Licence may be modified at the discretion of the Board.