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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

File No.: **2BB-BOS0712**

July 20, 2007

Miramar Hope Bay Ltd
300-889 Harbourside Drive
North Vancouver, BC
V7P 3S1
tmaloof@miramarmining.com

RE: Licence 2BB-BOS0712

Dear Ms Maloof,

Please find attached Licence No. **2BB-BOS0712** issued to Miramar Hope Bay Limited (MHBL) 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 30 days is required from 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.

DECISION

LICENCE NUMBER: 2BB-BOS0712

This is the decision of the Nunavut Water Board (NWB) with respect to an application for a renewal of a Water Licence dated April 26, 2007 made by:

MIRAMAR HOPE BAY 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, solid waste disposal in a landfill, 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 (NWSRTA)* 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 *NWSRTA*, waived the requirement to hold a public hearing, and determined that:

**Licence Number 2BB-BOS0712 be issued subject to the terms and conditions contained therein.
(Motion #: 2007-05-04)**

SIGNED this 6th day of July, 2007 at Gjoa Haven, NU.



Thomas Kabloona
A/Chief Executive Officer

TK/sl

The NWB strongly recommends that the Licensee consult the comments received by interested persons on issues identified. Comments were received from Health Canada, the Government of Nunavut Department of Environment, Kitikmeot Inuit Association, Indian and Northern Affairs Canada and Environment Canada. The NWB notes that the Government of Nunavut and Environment Canada request the installation of an incineration device capable of meeting emission limits established under the Canada-wide Standards (CWS) for Dioxins and Furans and the CWS for Mercury Emissions. All comments are attached for your consideration.

Finally the NWB notes that MHL does not have immediate plans to obtain a bulk sample from the Boston deposit but rather a larger mineral sample will be obtained from split diamond drill core or reverse circulation drill cuttings. The NWB maintains bulk sampling terms and conditions within this Licence and requests that the Licensee provide notification of intent to resume sampling operations. In addition, and in accordance with condition Part B, item 7(n) the NWB requires an update on the volumes of waste rock and ore being stored at the Boston site.

Sincerely,



Thomas Kabloona
A/Chief Executive Officer

TK/sl

Enclosure: Licence No. 2BB-BOS0712
Comments KIA, GN-DoE, INAC, EC, HC

cc:	Andrew Keim	INAC
	Carson Gillis	NTI
	Cindy Parker	EC
	Colette Spagnuolo	INAC
	Earle Baddaloo	GN-DOE
	Erin Calder	NWMB
	Kevin Tweedle	KIA
	Jim Rogers	INAC
	John Dawe	GN
	Paul Savoie	DFO
	Peter Kusugak	INAC
	Leslie Payette	NIRB

LICENCE NUMBER: 2BB-BOS0712

BACKGROUND

Miramar Hope Bay Limited (MHBL) submitted an application dated April 26, 2007 to the NWB for renewal of the Boston Exploration Project water licence. The existing licence was issued by the NWB on October 5, 2001 (NWB1BOS0106). The 2001 application was subject to a pre-hearing conference and written hearing. The resulting licence covered prospecting, continued surface drilling, core-splitting and logging on site, underground drilling, operation of the bulk sample plant, domestic use and associated activities, 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 includes 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, 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.

CURRENT APPLICATION

No changes to the scope of the project were indicated or requested, however the NWB notes that the landfill and landfarm facilities have not been reviewed previously by the Board and interested parties.

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.

Security

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.

Water Use

The water use under this Licence has been adjusted 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 100m³/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 recommendation to the NWB. The report must also contain a cover letter from Licensee outlining a plan to address the Geotechnical Engineer's recommendations. This requirement is detailed under Part D, Item 20.

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 has maintained the containment pond discharge parameters from the previous licence.

Sewage Treatment Operation and Maintenance Manual

The Board notes a number of non-compliant discharges reported in the annual report. As such the Licensee is required to provide an Operations and Maintenance Manual for the Waste Water Treatment Facility under Part E, Item 5. In addition to the guidelines referenced, the Manual shall address discharge procedures for the WWTF and any erosion control measures that are, or can be put in place, a description of any wetland treatment/land application that is provided to the RBC effluent prior to entering the lake and spill contingency procedures that are also found in the Spill Contingency Plan for the project. Discharge criteria remain consistent with the previous licence.

Landfarm Facility

In reviewing the Application and file information, the NWB noted that the landfarm has been operational for some time, with Annual Reports indicating its use for treatment of petroleum related spills. The Board is requesting that the Licensee provide, for review and approval the details related to the design construction, operation and eventual closure of the facility. In addition the proposed Soil Quality Remediation Objectives for the facility's operation are required to be submitted. Part E, Item 7 outlines the information requested by the Board.

Parameters set for waste water discharge 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.

In their review of the Application, the GN-DOE and INAC had both requested additional information on the Landfarm facility be provided as conditions in the Licence renewal. These requirements imposed within this Licence under Part E, Item 7.

Environment Canada, in their review of the NWB1BOS0106 2006 Annual Report noted the lack of information provided on the operation of a Land treatment farm, including details on the construction of the facility. Part E, Item 7 also requires the submission of a Landfarm Operation and Maintenance Plan.

Solid Waste Disposal

Through the review of the information provided, the NWB has determined that additional information is needed with respect to the landfill and its construction, operation and closure. The Licensee is therefore requested to provide the NWB with information for review and approval to ensure proper design and function of the landfill. The NWB is requesting this information within the submission of a Landfill Operation and Maintenance Plan, addressed under Part E, Item 6.

Waste Rock/Ore Storage Plan

Licence NWB1BOS0106, Part K, Item 1 required the Licensee to submit a Water and Ore/Waste Rock Management Plan. The Plan was due October 5, 2002, twelve (12) months following the issuance of the Licence. The NWB has noted in its review of the application and file, that this specific Plan has not been received. Therefore, the NWB has carried through to this renewal, and imposed a Licence condition to address this lack of information, under Part E, Item 8, which is due no later than six (6) months following the issuance of this Licence.

Other

Construction

The previous water Licence NWB1BOS0106, Part J contained conditions that applied to the construction phase of the Project and referred to the construction of various dams and dykes. as the Applicant has not indicated any further construction is required, therefore these items have been removed. Any future construction activities will require the submission of an amendment to the Licence, at least three (3) months in advance of any propose activity.

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 water licence 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.

Environmental Management

Spill Contingency Plan (SCP)

The Board agrees with the comments provided by the Government of Nunavut, Indian and Northern Affairs Canada and Environment Canada. The Plan is not specific to the Boston projects and contains a large section related to Roberts Bay. The Plan is also missing appropriate contact information and material safety data sheets. A revised plan is requested in Part H, Item 1. The Plan must be prepared in accordance with the *Spill Contingency Planning and Reporting Regulations* developed under Section 34 of the *Environmental Protection Act*. The Licensee must update the Plan by referring, but not limiting, to the comments received by interested parties during the review of the application.

Abandonment and Restoration Plan (A&R)

The Board agrees with comments provided by Indian and Northern Affairs Canada and as such requires that the Plan be revised and resubmitted as it does not incorporate facilities that have potential significant impact such as the landfill and the landfarm with its residual soils. The current Plan is also difficult to navigate without references and page numbers.

The NWB has requested that a revised Plan be submitted for approval of the Board under Part I, Item 1 of the Licence.

The Plan must be specific to the scope of this Licence for the Boston site 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*. The Licensee shall update the Plan by referring to, but not being limited by, the comments received by interested parties during the review of the application.

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 by the Government of Nunavut, Department of Environment, Environment Canada and Indian and Northern Affairs 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-BOS0712]

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

of Miramar Hope Bay Limited
(Licensee)

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:

Licence Number 2BB-BOS0712

Water Management Area NUNAVUT 07

Location BOSTON ADVANCED EXPLORATION PROJECT

Purpose WATER USE AND WASTE DISPOSAL

Classification of Undertaking MINING AND MILLING – TYPE “B”

Quantity of Water Not to Exceed 100 CUBIC METRES PER DAY

Date of Licence JULY 6, 2007

Expiry Date of Licence JULY 31, 2012

Dated this 6th day of July, 2007 at Gjoa Haven, NU.


Thomas Kabloona
A/Chief Executive Officer

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 (with the general coordinates of latitude 67° 39'N and longitude 106° 22'W).

- i. 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;
- ii. 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 Engineering, Geological and Geophysical Act (Nunavut) S.N.W.T. 1998, c.38, s.5;

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

“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 a lined, engineered area designed to contain and treat, using bioremediation, hydrocarbon impacted sediment and soil;

“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);

“Sludge” means accumulated and concentrated solids removed from the Sewage Disposal 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

- i. 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*;
- ii. All inspection and enforcement services regarding this Licence will be provided by Inspectors appointed under the *Act*; and
- iii. 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 of \$30, 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 a security deposit in the amount of \$1.7 million dollars.
3. The security deposit shall name as joint payees the Kitikmeot Inuit Association and the Minister, and shall be made in a form and schedule satisfactory to the Minister.

4. The security deposit may be applied to carry out work necessary to fulfill requirements of this Licence and land use authorizations where there is contravention of a condition of the Licence and failure by the Licensee to comply with a direction issued by the Board or by any other competent and authorized government body or official. This includes operational requirements as well as the provision of any approved Abandonment and Restoration Plan.
5. 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.
6. The security deposit shall be maintained until such time as the Minister and the Kitikmeot Inuit Association are 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.
7. 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, but not be limited to, the following information:
 - i. the monthly and annual quantities in cubic metres of all freshwater obtained from Aimaoktatuk (Spyder) Lake at Monitoring Station BOS-1;
 - ii. the monthly and annual quantities in cubic metres of Minewater pumped from the underground;
 - iii. the monthly and annual quantities in cubic meters of treated Minewater and surface drainage discharged at Monitoring Station Number BOS-2;
 - iv. the monthly and annual quantities in cubic meters of treated Sewage effluent discharged at Monitoring Station Number BOS-3;
 - v. the monthly and annual quantities in cubic metres of Sludge removed from the Sewage Disposal Facility;
 - vi. the annual quantities in cubic metres of all soil and types of contaminants from all locations that are placed within the Landfarm facility;
 - vii. tabular summaries of all data generated under the Monitoring Program;
 - viii. a summary of modification and/or major maintenance work carried out on the Water Supply and the Waste Disposal Facilities, including all associated structures, and an outline of any work anticipated for the next year;
 - ix. a list of unauthorized discharges and follow-up action taken;

- x. updates or revisions to the Abandonment and Restoration Plan, QA/QC, Waste Rock and Ore Storage Plan, Spill Contingency Plan, Landfill Plan, and Landfarm Plan;
 - xi. a brief description of follow-up action taken to address concerns detailed in inspection and compliance reports prepared by the Inspector;
 - xii. a summary of drilling activities and progressive reclamation of drill sites;
 - xiii. 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;
 - xiv. an estimate of both the current and anticipated volume of waste rock and ore stockpiled on site;
 - xv. a public consultation/participation report describing consultation with local organizations and residents of the nearby communities, if any were conducted;
 - xvi. a summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year;
 - xvii. a summary of any specific studies or reports requested by the Board, and a brief description of any future studies planned or proposed; and
 - xviii. any other details on water use or Waste disposal requested by the Board by November 1st of the year being reported.
8. 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.
9. The Licensee shall maintain flow meters or other such devices, or implement suitable methods required for the measuring of water volumes, to be operated and maintained to the satisfaction of an Inspector.
10. 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.
11. The Licensee shall immediately report to the 24-hour Spill Report Line (867) 920-8130 any spills of Waste that are reported to or observed by the Licensee.
12. The 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:

(i) 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

(ii) 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

(iii) Analyst Contact:

Taiga Laboratories
Department of Indian and Northern Affairs
4601 – 52 Avenue, P.O. Box 1500
Yellowknife, NT X1A 2R3
Telephone: (867) 669-2781
Fax: (867) 669-2718

13. 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.
14. 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.
15. 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 purposes 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. The Licensee shall maintain the Water Supply Facility to the satisfaction of the Inspector.

3. Streams cannot be used as a water source unless authorized and approved by the Board.
4. If the Licensee requires water in sufficient volume that the source water body may be drawn down the Licensee shall, at least 30 days prior to commencement of use of water, submit to the Board for approval the following: volume required, hydrological overview of the water body, details of impacts, and proposed mitigation measures.
5. 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.
6. The Licensee shall not remove any material from below the ordinary high water mark of any water body unless authorized.
7. The Licensee shall not cause erosion to the banks of any body of water and shall provide necessary controls to prevent such erosion.
8. 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 (30) 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 of domestic waste, unless otherwise approved by the Board
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 provide to the Board, documented authorization from the relevant community prior to the backhauling of any waste.
5. The Licensee shall backhaul and dispose of all hazardous wastes generated through the course of the operation in an approved waste disposal site.
6. 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.
7. All Minewater and surface drainage from decline, waste rock and ore stockpiles shall be pumped to a Containment Pond prior to discharge.

8. All discharge from Containment Pond(s) at Monitoring Station BOS-2 shall not exceed the following 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	25.0	50.0
Oil and Grease		no visible sheen

The Waste discharged shall have a pH of between 6.0 and 9.5

9. All Containment Pond discharges shall be released in such a manner to minimize surface erosion.
10. The Licensee shall ensure that Containment Ponds are designed and bermed in such a way to ensure there is no seepage. A report on seepage shall be included as part of the Geotechnical Engineer's annual report required by Part D, Item 20.
11. The Licensee shall direct all Sewage to the Sewage Disposal Facility or as 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) meters from the normal high water mark and such that they do not enter any water body.
13. If the Licensee contemplates the disposal and treatment of Sludge on land, it shall submit to the Board for approval at least four (4) months prior to the disposal of Sludge a proposal which shall address, but not be limited to:
- Location of disposal area;
 - Quantities and composition of sludge;
 - Mitigation measures to control run-off and restrict access;
 - A program for water quality monitoring;
 - An implementation schedule; and
 - An executive summary of the proposal in English and Inuktitut.
14. The Licensee shall implement the proposal specified in this Part as and when approved by the Board.

15. If the Board does not approve the proposal referred to in this Part, the Licensee shall revise this proposal and resubmit it to the Board for approval within two (2) months of receiving notification of the Board's decision.
16. The Licensee shall, for initial seasonal commissioning of the camp, notify an Inspector at least ten (10) days prior to start-up of the Sewage Disposal Facility and subsequent discharge from the facility.
17. All Sewage discharged from the Sewage Disposal Facility at Monitoring Station BOS-3 shall not exceed the following quality standards:

Parameter	Maximum Average Concentration
BOD ₅	80 mg/L
Total Suspended Solids	100 mg/L
Faecal Coliform	10,000 CFU/100 mL
Oil and Grease	no visible sheen
pH	between 6.0 and 9.5

18. The licensee shall ensure that effluent discharged from monitoring station BOS-4, is demonstrated to be non-acutely toxic in accordance with Part J, Item 3.
19. The Licensee shall discharge waste in such a manner to minimize surface erosion.
20. 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.
21. All effluent being discharged from the Bulk Fuel Storage Facilities, and the Landfarm at Monitoring Stations BOS-5 and BOS-6 respectively, shall meet the following effluent quality standards:

Parameter	Maximum Average Concentration (mg/L)
Benzene	370
Toluene	2
Ethylbenzene	90
Lead	1

Oil & Grease

15.0 and no visible sheen

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22. The Licensee shall maintain all constructed facilities, including the Sewage Disposal Facility, Landfarm, Landfill, Bulk Fuel Storage Facility and the Containment Ponds to the satisfaction of an Inspector.
 23. The Licensee shall notify an Inspector at least ten (10) days prior to any discharge from the facilities in this Part.

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 a distance of at least thirty (30) metres from the ordinary high water mark in such a fashion that they do not enter the water.
5. The Licensee shall submit to the Board for approval, within ninety (90) days of the issuance of this Licence, an Operation and Maintenance Manual for the Waste Water Treatment Facility 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"*.
6. The Licensee shall submit to the Board for approval within ninety (90) days of issuance of the Licence, a Landfill Operation and Maintenance Plan which shall address, but not be limited to:
 - a. Engineered design drawings of the facility (stamped by a professional engineer registered in Nunavut);
 - b. Operation and maintenance protocols for the proposed facility;
 - c. Runoff management; and

- d. Monitoring program.
7. The Licensee shall submit to the Board for approval within ninety (90) days of issuance of the Licence, a Landfarm Operation and Maintenance Plan which shall address, but not be limited to:
 - i. Engineered design drawings of the facility (stamped by a professional engineer registered in Nunavut);
 - ii. Operation and maintenance protocols for the facility;
 - iii. Runoff management;
 - iv. Soil Quality Remediation Objectives; and
 - v. Monitoring program.
 8. Licensee shall submit, to the Board for approval, within six (6) months of issuance of this License, a Water and Ore/Waste Rock Management Plan that addresses the ARD and metal leaching potential of the materials at the site.
 9. If the Board does not approve the Plans referred to in this Part, the Licensee shall revise the Plans and resubmit to the Board for approval within two (2) months of receiving notification of the Board's decision
 10. The Licensee shall implement the Plans specified in this Part as and when approved by the Board.
 11. The following measures will be taken 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:
 - i. Timing of weir removal is to be done during the low flow period;
 - ii. Storage of all extraneous sand bags and scrap materials away from the watercourse during the duration of the weir operation;
 - iii. 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;
 - iv. Removal of naturally occurring material from the bed or bank of the creek below ordinary high water mark is prohibited;
 - v. 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;
 - vi. Emplacement of the sandbag material shall be done such that the stream channel is not significantly obstructed during the spring freshet;
 - vii. Materials used shall be clean and contaminant free;
 - viii. The deposition of debris or sediment into any waterbody is prohibited. The materials shall be disposed of above the high water mark in a such a fashion that they do not enter water; and
 - ix. 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 (30) metres of the ordinary high water mark of any water body, unless otherwise approved by the Board.
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 (30) 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. 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 and Waste Disposal Facilities provided that such Modifications are consistent with the terms of this Licence and the following requirements are met:
 - i. the Licensee has notified the Board in writing of such proposed Modifications at least sixty (60) days prior to beginning the Modifications;
 - ii. such Modifications do not place the Licensee in contravention of the Licence or

the *Act*;

- iii. 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
 - iv. 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 within sixty (60) days of issuance of the Licence, 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. The Licensee shall update the Plan by referring to, but not limited by, the comments received by interested parties during the review of the application and include updated emergency contact information and updated material safety data sheets to be included as an Appendix.
2. If the Board does not approve the Spill Contingency Plan referred to in this Part, the Licensee shall revise this proposal and resubmit it to the Board for approval within two (2) months of receiving notification of the Board's decision.
3. The Licensee shall implement the Plan specified in Part H, Item 1 as and when approved by the Board
4. The Licensee shall review the Plan referred to in this Part as required by changes in operation and/or technology and modify the Plan accordingly. Further revisions to the Plan are to be submitted in the form of an Addendum to be included with the Annual Report, unless directed otherwise by an Inspector.
5. 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 (30) metres from the ordinary high water mark of any adjacent water body and inspected on a regular basis. The Licensee shall provide secondary containment for fuel storage areas.
6. 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.

7. The Licensee shall regularly inspect fuel tanks and connectors for leaks and movement and shall keep a written log of inspections to be made available to an Inspector upon request.
8. If during the term of this Licence, an unauthorized discharge of waste occurs, or if such a discharge is foreseeable, the Licensee shall:
 - i. Employ the Spill Contingency Plan;
 - ii. Report the spill immediately to the 24-Hour Spill Line at (867) 920-8130 and to the Inspector at (867) 975-4295; and
 - iii. 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, 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. The Licensee shall refer to comments submitted by interested parties as part of the review of the Plan.
2. If the Plan referred to in Part I, Item 1 is not approved, the Licensee shall make the necessary revisions and resubmit the Plan within thirty (30) days following notification from the Board
3. The Licensee shall implement the Plan specified in Part I, Item 1 as and when approved by the Board.
4. The Licensee shall review the Plan referred to in this Part as required by changes in operation and/or technology and modify the Plan accordingly. Revisions to the Plan are to be submitted in the form of an Addendum to be included with the Annual Report, unless directed otherwise by an Inspector.
5. The Licensee shall complete all restoration work prior to the expiry of this Licence.
6. The Licensee shall carry out progressive reclamation of any components of the project no longer required for the Licensee's operations.

7. When possible to do so, the Licensee shall backfill and restore, to the satisfaction of an Inspector, all sumps to the pre-existing natural contours of the land.
8. The Licensee shall remove from the site infrastructures 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.
9. All roads and airstrip, if any, shall be re-graded to match natural contour to reduce erosion.
10. All culverts shall be removed and the drainage opened up to match the natural channel. Measures shall be implemented to minimize erosion and sedimentation.
11. In order to promote growth of vegetation and the needed microclimate for seed deposition, all disturbed surfaces shall be prepared by ripping, grading, or scarifying the surface to conform to the natural topography.
12. Areas that have been contaminated by hydrocarbons from normal fuel transfer procedures shall be reclaimed to the satisfaction of an Inspector. The use of reclaimed soils for the purpose of back fill or general site grading may be carried out only upon approval by an Inspector.
13. Drill holes and disturbed areas will be restored to natural conditions immediately upon completion of the drilling. The reclamation of drill holes must include the removal of any drill casing materials and the capping of holes with a permanent seal.
14. The Licensee may store drill core produced by the appurtenant undertaking in an appropriate manner and location at least thirty (30) 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.
15. 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 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)	1652-1a

		cubic metres)	
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	Active	n/a
BOS-8	Waste Rock and Ore Storage Pad	Active	n/a

2. The Licensee shall sample at Monitoring Program Station BOS-2, once prior to discharge and weekly thereafter for parameters listed in a the beginning and once near the end of discharge from Monitoring Station BOS-2 for the parameters listed under Part D, Item 8.

3. 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	Faecal Coliforms
Total Suspended Solids	pH
Oil and Grease (and visual)	

4. The Licensee shall conduct toxicity testing on treated sewage 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:

- Acute lethality to Rainbow Trout, *Oncorhynchus mykiss* (as per Environment Canada's Environmental Protection Series Biological Test Method EPS/1/RM/13); and
- Acute lethality to *Daphnia magna* (as per Environment Canada's Environmental Protection Series Biological Test Method EPS/1/RM/14).

5. The Licensee shall sample at Monitoring Program Stations BOS-5 and BOS-6 monthly during removal of water from the facilities and at Station BOS-7 during periods of observed flow. Samples shall be 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 (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

6. 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.
7. Samples obtained under Part J, Item 6 are to be analyzed 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),

8. 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

9. The Monitoring Program and compliance dates specified in the Licence may be modified at the discretion of the Chief Administrative Officer.
10. The Licensee shall maintain the necessary signs to identify the stations of the

Monitoring Program. All signs shall be located and maintained to the satisfaction of an Inspector.

11. The Licensee shall measure and record, in cubic metres, the daily quantities of water utilized for camp, drilling and other purposes from all sources.
12. The Licensee shall measure and record, in cubic metres, the monthly and annual quantities in cubic metres of Minewater pumped from the underground.
13. The Licensee shall measure and record, in cubic metres, the monthly and annual quantities in cubic meters of treated Sewage effluent discharged at Monitoring Station Number BOS-3.
14. 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
15. 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.
16. 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.
17. The Licensee shall submit a revised Quality Assurance/Quality Control Plan to an Analyst for approval within three (3) months of the issuance of the licence. The plan shall include analysis of field blanks and certified reference material, and replicate sampling in order to assess accuracy, precision and field contamination.
18. The Licencee shall annually review the approved Quality Assurance/Quality Control plan and modify it as necessary. Proposed modifications shall be submitted to an Analyst for approval.
19. The approved Quality Assurance/Quality Control Plan shall be submitted to the Board for review and implemented as approved by an Analyst.
20. 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.
21. All analyses shall be performed in a laboratory accredited according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.
22. An Inspector may impose additional monitoring requirements.

23. A Monitoring Program 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, Items 2 through 8 and Items 11 through 14 inclusive.
24. The Licensee shall include in the Annual Report required under Part B, Item 7, all monitoring data and analysis and information required by this Part.