



## NUNAVUT WATER BOARD WATER LICENCE RENEWAL

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Licence No. 2BB-MRY1114

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

BAFFINLAND IRON MINES CORPORATION

(Licensee)

2275 UPPER MIDDLE ROAD EAST, SUITE 300, OAKVILLE, ON  
L6H 0C3 SUITE 1016, 120 ADELAIDE STREET WEST, TORONTO, ON M5H 1T1

(Mailing Address)

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

Licence Number/Type: 2BB-MRY1114 TYPE "B"

Water Management Area: NUNAVUT 05

Location: MARY RIVER **EXPLORATION** PROJECT  
QIKIQTANI REGION, NUNAVUT

Classification: MINING AND MILLING UNDERTAKING

Purpose: DIRECT WATER USE AND DEPOSIT OF WASTE

Quantity of Water use not  
to Exceed: THREE HUNDRED AND EIGHTY FIVE (385)  
CUBIC METRES PER DAY

Date of Licence Issuance: April 5, 2011

Expiry of Licence: April 5, 2014

This Licence renewal issued and recorded at Gjoa Haven, Nunavut, includes and is subject to the annexed conditions.

Thomas Kabloona,  
**Nunavut Water Board, Chair**

## PART A: SCOPE, DEFINITIONS AND ENFORCEMENT

### 1. Scope

This amended Licence allows for the use of Water and the deposit of Waste in support of a Mining and Milling Undertaking, classified as per Schedule 1 of the Regulations, at Mary River Exploration Project (Previously called Mary River Project), located approximately 160 kilometres (km) south of Pond Inlet within the Qikiqtani Region, Nunavut. The activities associated with the Undertaking generally includes geotechnical and exploration drilling programs (both land based and on-ice drilling) at various project sites as outlined in Appendix A to the Licensee's submission to the NWB dated October 10, 2013. Licensee's correspondence to the Board in October 2012, bulk sampling, progressive reclamation programs, activities in support of future engineering and scientific studies and the operation of existing satellite camps and associated water uses.

~~This Licence allows for the use of water and the deposit of waste for a Mining and Milling undertaking classified as per Schedule II of the Regulations at the Mary River Project, located approximately 160 kilometres south of Pond Inlet within the Qikiqtani Region, Nunavut. This Licence allows for exploration and bulk sampling operations, all-weather road construction, land-based and on-ice drilling, a geotechnical drilling program, progressive reclamation programs, activities in support of engineering and scientific studies related to the draft EIS, ongoing maintenance to existing project infrastructure, camp operations, domestic waste treatment and/or disposal, fuel containment, and all associated uses at the Mary River Project.~~

- 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

**“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 and modifications inconsistent with the terms and conditions of the Licence;

**“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 facilities as described in the as-built construction report for the Mary River Camp (Ref. No. 09-058) and the construction Report for the fuel storage facility at Milne Inlet (Ref. No. 06-090);~~

**Bulk Sampling Program** means ~~the activities described in the amendment application dated November 15, 2006; the Bulk Sampling Management Plan dated October 24, 2007 and the Updated Bulk Sampling Management Plan dated March 31, 2008.~~ any additional bulk sampling activities approved by the Board as per Part D, Item 24;

**“Effluent”** means treated or untreated liquid waste material that is discharged into the environment from a structure such as a settling pond, ~~Landfarm~~ landfarm or a treatment plant;

**“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;

**“ICP Scan”** means the laboratory method for determining trace metals in water through Emission Spectroscopy using inductively coupled plasma (including from approximately 22 to 32 elements, depending on the laboratory performing the analysis);

**“Infrastructure”** means all construction necessary for mining, such as watercourse crossings, piping, sewage and water systems, reservoirs, and roads;

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

**“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;

~~“Non-Hazardous Waste Landfill” means the facility as described in the report entitled “Mary River Project, Mary River Landfill QA/QC Report (As-built Report), Genivar Consultants LP, September 2, 2010 for the disposal of non-hazardous solid waste;~~

**“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;

~~“Polishing/Waste Stabilization Ponds” (PWSP) means the containment ponds designed as interim and/or contingency containment of sewage at the Mary River and Milne Inlet Camps;~~

“Regulations” means the *Northwest Territories Water Regulations SOR/93-303 8th June, 1993*, and application of Regulations Order SOR/2002-253 12 July, 2002;

“Sewage” means all toilet wastes and greywater;

“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.

~~“Waste Water Treatment Facilities” (WWTF) means the treatment facilities and/or associated contingency infrastructure used for the treatment of sewage at the Mary River Camp(s) and the Milne Inlet Camp.~~

### 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 for the right to the use of water, in accordance with Section 9 of the *Regulations*.
2. The Licensee shall, within thirty (30) days of issuance of this licence, furnish and maintain security with the Minister in the form that is satisfactory to the Minister, in the amount of ~~six~~one million, ~~seven hundred thirty eight thousand~~, two hundred ~~sixteen~~ ~~(6,738,216 and fifty thousand (1,250.00))~~ dollars.
3. The Licensee shall furnish and maintain security with the Minister as required by the Board in a form and amount acceptable to the Minister.
4. The Licensee may, submit to the Board for approval, a written request for a reduction to the amount of security. The submission shall include supporting evidence to justify the request.
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.
6. The Licensee shall file with the Board no later than March 31<sup>st</sup> of the year following the calendar year being reported, an Annual Report on the appurtenant undertaking which shall contain the following information:
  - a. the monthly and annual volumes, in cubic metres, of all fresh water obtained from sources of water identified for camp use under Part C, Item 1;
  - b. the monthly and annual volumes in cubic metres of all freshwater obtained for the purpose of drilling and other associated uses;
  - c. the monthly and annual volume in cubic meters of treated Sewage effluent discharged at Monitoring Station [TBD] (in the event that a sewage treatment plant is established at Steensby), ;  
~~the monthly and annual volume in cubic meters of treated Sewage effluent discharged at Monitoring Station MRY 4, Mary River Camp WWTF at Monitoring Station MRY 5, and at Milne Inlet Camp WWTF Monitoring Station at MRY 5 along with any waters discharged from the respective PWSPs;~~
  - d. the monthly and annual volumes in cubic metres of Sludge removed from , any satellite camps, and details on the storage and/or disposal;~~the monthly and annual volumes in cubic metres of Sludge removed from the Waste Water Treatment Facilities at Mary River Camp and Milne Inlet Camp and details on the storage and/or disposal;~~
  - e. a summary, including photographic records before, during and after construction activities, of any modifications and/or major maintenance work

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- carried out on the Water Supply ~~and the Wastewater Treatment Facilities~~, including all associated structures, and an outline of any work anticipated for the next year;
- f. the geochemical analysis of drill cores as per Part F, Item 3;
  - g. a detailed discussion on the performance, installation, and evaluation, including the use of photographic record, of the primary and secondary containment functions used in fuel storage to safeguard impacts to freshwaters;
  - h. a list of unauthorized discharges and a summary of follow-up action(s) taken;
  - i. a brief description of follow-up action(s) taken to address concerns presented within inspection and compliance reports prepared by the Inspector;
  - j. an update, where required under Part B, Item 11, in the form of an addendum or revision to the Abandonment and Restoration Plan, Emergency Spill Response Plan, Site Water Management Plan, Waste Water Management Plan, Waste Rock and Ore Storage Plan, QA/QC, ~~Landfill Operations and Maintenance Plan,~~  
~~and Landfarm Plan;~~
  - k. a description of all progressive and or final reclamation work undertaken, including drill sites, presented with photographic records of site conditions before, during and after completion of operations;
  - l. an updated estimate of the current restoration liability required under Part B, Item 2, based upon the results of progressive restoration, restoration research, project development monitoring, and any changes or modifications to the project;
  - m. tabular summaries of all data generated under the Monitoring Program, Part I;
  - n. a summary of public consultation/participation, describing consultation with local organizations and residents of the nearby communities, if any were conducted;
  - o. a summary of any specific studies or reports requested by the Board, and a brief description of any future studies planned or proposed; and
  - p. any other details on water use or waste disposal requested by the Board by November 1 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 and maintain flow meters or other such devices, or implement suitable methods required for the measuring of water and waste volumes, to be operated and maintained to the satisfaction of an Inspector.
9. 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.
10. The Licensee shall, for all Plans submitted under this Licence, implement the Plan as approved by the Board in writing.
11. 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, including a record of revision, are to be submitted in the form of an Addendum to be included with the Annual Report.
12. 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.
13. The Licensee shall post signs in the appropriate areas to identify the location of Monitoring Stations designated under Part I. All signs shall be located and maintained to the satisfaction of an Inspector.
14. 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:

(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](mailto:licensing@nunavutwaterboard.org)

(b) **Inspector Contact:**

Manager of Field Operations, 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 is responsible to ensure that any documents or correspondence submitted by the Licensee to the Board have been received and acknowledged by the Manager of Licensing.
17. This Licence is assignable as provided for in s. 44 of the *Act*.
18. The expiry or cancellation of this Licence does not relieve the holder from any obligations imposed by the Licence as per s. 46 of the *Act*.

#### **PART C: CONDITIONS APPLYING TO WATER USE**

1. The Licensee shall obtain all water for domestic purposes from the following locations, or as otherwise approved by the Board:

- ~~a. Mary River Camp – Camp Lake at Monitoring Station MRY 1;~~
- ~~b. Milne Inlet Camp – Philips Creek at Monitoring Station MRY 2;~~
- ~~c. Km 99 Lake at Monitoring Station MRY 3;~~
- ~~d. An Alternative water source to for Milne Camp at Km 32 Lake;~~
- ~~e. Deposit 4 Camp – Proposed under Amendment No. 1 application and to be identified prior to use;~~
- f. Rail Camp – an adjacent unnamed lake; and
- g. Steensby Inlet camp – an unnamed lake near camp or the alternative source of water identified in the application.

Total water volume for camp use from all sources referenced above shall not exceed sixty (60) cubic metres per day. The total volume of water for drilling and associate uses shall be obtained from sources proximal to drill targets, or as otherwise approved by the Board and shall not to exceed three hundred and twenty-five (325) cubic metres per day. Total volume of water for the purpose of this Licence shall not exceed three hundred and eighty-five (385) cubic metres per day.

2. ~~The Licensee shall maintain the Water Supply Facilities to the satisfaction of the inspector.~~ 3. Streams cannot be used as a water source unless authorized and approved by the Board in writing.
4. The Licensee shall, at least thirty (30) days prior to the commencement of use of water, submit the following to the Board for approval in writing, in cases where the Licensee requires water in sufficient volume that the source water body may be drawn down:

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. The Licensee shall implement Sediment and erosion control measures prior to and maintain such measures during the undertaking 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 approved by the Board in writing.
2. The Licensee is authorized to dispose of all acceptable food waste, paper waste and untreated wood products in an incinerator.
3. The Licensee shall not open burn plastics, wood treated with preservatives, electric wire, Styrofoam, asbestos or painted wood so as 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.
4. The Licensee shall submit to the Board and the Inspector, thirty (30) days prior to the removal and transfer of waste, a declaration of authorization from the Hamlet of Pond Inlet and/or any other hamlet that is the recipient of such waste, which clearly states that authorization has been granted for the deposit of approved solid waste by the Licensee, in the Hamlet's NWB licensed solid waste facility.
5. The Licensee shall backhaul and dispose of all hazardous wastes, waste oil and non-combustible waste generated through the course of the operation, at a licensed 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 by the Board in writing.

7. ~~The Licensee shall dispose of all Sewage waste generated at the Mary River Camp and the Milne Inlet Camp to the Waste Water Treatment Facilities, or as otherwise approved by the Board.~~8. The Licensee shall contain all greywater in a sump located at a distance of at least thirty-one (31) metres above the ordinary high water mark of any water body, at a site where direct flow into a water body is not possible and no additional impacts are created, unless otherwise approved by the Board in writing.
9. The Licensee shall contain all other toilet wastes in latrine pits or use incineration, chemical, portable or composting toilets. Latrine pits shall be located at a distance of at least thirty-one (31) metres above the ordinary high water mark of any water body, treated with lime and covered with native material to achieve the pre-existing natural contours of the land prior to abandonment.
10. The Licensee shall notify an inspector at least ten (10) days prior to any discharge from facilities under this part.
11. The Licensee shall ensure that all Mine water and surface drainage from ~~the weathered~~ ore stockpiles shall be directed to a discharge location that will allow for monitoring.
12. All Effluent discharged from ~~the two~~any Bulk Sample open pits, weathered ore stockpiles, lump ore and fine ore stockpiles at Monitoring Stations ~~MRY 8, MRY 9, MRY 10, MRY 12 and MRY 13~~ ~~[TBD in relation to any potential bulk sample]~~ shall not exceed the following Effluent quality limits:

**Comment [cjk1]:** While these stations have migrated to the Type A Water Licence, BIMC wishes to retain these provisions in the event a future bulk sample is proceeded with in accordance with Part D, Item 24

**Comment [cjk2]:** See above comment

Parameter	Maximum Concentration of Any Grab Sample (mg/L)
Total Arsenic	0.50
Total Copper	0.30
Total Lead	0.20
Total Nickel	0.50
Total Zinc	0.50
Total Suspended Solids	15.0
Oil and Grease	No visible sheen
The waste discharge shall have a pH of between 6.0 and 9.5	

13. ~~All Sewage Effluent discharged from the Waste Water Treatment Facility, at Monitoring Stations MRY 4 and MRY 4a shall not exceed the following Effluent quality limits:-~~

Parameter	Maximum Concentration of Any Grab Sample (mg/L)
<del>BOD<sub>5</sub></del>	<del>30 mg/L</del>
<del>Total Suspended Solids</del>	<del>35 mg/L</del>
<del>Faecal Coliform</del>	<del>1000 CFU/100 mL</del>

Oil and Grease	No visible sheen
pH	Between 6.0 and 9.5

14. ~~All Sewage discharged from the Waste Water Treatment Facility at Monitoring Station MRY 5 and MRY 5a shall not exceed the following Effluent quality limits:~~

Parameter	Maximum Concentration of Any Grab Sample (mg/L)
BOD <sub>5</sub>	100 mg/L
Total Suspended Solids	120 mg/L
Faecal Coliform	10,000 CFU/100 mL
Oil and Grease	No visible sheen
pH	Between 6.0 and 9.5

15. ~~The licensee shall ensure that effluent discharged from monitoring stations MRY 4 and MRY 4a, and MRY 5 and MRY 5a, is demonstrated to be non-acutely toxic through testing in accordance with Part I, Item 5.~~

16. ~~The Board approved the Plan entitled "Waste Water Management Plan," dated March 31, 2010. The Licensee is required to update the plan annually and submit any changes, in the form of an addendum complete with a record of revision, to the Board for review by March 31<sup>st</sup> of the year following the update.~~

17. ~~All PWSP discharges shall be released in a manner so as to minimize surface erosion.~~

18. ~~The Licensee shall ensure that PWSP's are designed and bermed to ensure there is no seepage. A report on seepage shall be included as part of the Annual Report required under Part B, Item 6.~~

19. ~~An inspection of the earthworks, geological regime, and the hydrological regime of the Project is to be carried out during the summer of 2011, 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.~~

20. ~~All effluent discharged from the Bulk Fuel Storage Facilities at Monitoring Stations MRY 6 and MRY 7, shall not exceed the following effluent quality limits:~~

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

- ~~21. All Effluent discharged from the Non Hazardous Waste Landfill at Monitoring Stations MRY-11a and MRY-11b shall not exceed the Effluent quality limits contained in Part D, Item 12.~~
22. The Licensee shall maintain all constructed facilities, including the fresh water intakes, ~~Waste Water Treatment Facilities, Bulk Fuel Storage Facilities and the Polishing/Waste Stabilization Ponds (PWSPs)~~ to the satisfaction of an Inspector.
23. ~~The Board has previously approved the document entitled "Landfill Design and Operations (REF. NO. NB 102-00181/10-6)" dated March 31, 2008. This document remains valid under this Licence, subject to annual reviews and revisions as required under Part B, Item 11.24.~~ The Licensee shall submit to the Board, for approval, within sixty (60) days prior to the commencement of any further Bulk Sampling activities under this Licence, a revised Bulk Sampling Management Plan which addresses Acid Rock Drainage and Metal Leaching potential through the verification of Kinetic testing, Waste Rock Storage and Ore Storage management.
25. The Licensee shall contain all Greywater, ~~not directed to the WWTF,~~ in a sump located at a distance of at least thirty one (31) metres above the ordinary high water mark of any water body, at a site where direct flow into a water body is not possible and no additional impacts are created, unless otherwise approved by the Board.

**PART E: CONDITIONS FOR CAMPS, ACCESS INFRASTRUCTURES AND OPERATIONS**

1. The on-going operation, maintenance and upgrade of the Steensby and Mid-Rail Camps and their associated sewage treatment facilities, power supply and fuel storage shall remain under the renewed Type B Licence until the commercial facilities permitted under Type A Licence 2AM-MRY1325 are operational at both Steensby Inlet and the railway corridor.
2. The Licensee shall not erect camps or store material on the surface of frozen streams or lakes including the immediate banks except what is for immediate use. Camps shall be located such as to minimize impacts on surface drainage.
32. The Board has approved the plan entitled "2010 Site Water Management Plan," revised March 31, 2010 and submitted with the 2009 annual report.
43. 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.
54. 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.

| 65. 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 of at a distance of at least thirty-one (31) metres from the ordinary high water mark in such a manner that they do not enter the water. The Licensee shall ensure that any chemicals or waste associated with undertakings do not enter any water body

- | 76. The Licensee shall not cut any stream bank or remove any material from below the ordinary high water mark of any water body.
  - | 87. The Licensee shall not do anything that will cause erosion to the banks of any body of water and shall provide necessary controls to prevent such erosion.
  - | 98. The Licensee shall implement sediment and erosion control measures prior to and maintain such measures during construction and operation to prevent entry of sediment into water.
9. The Licensee shall undertake appropriate corrective measures to mitigate impacts on surface drainage resulting from the Licensee's operations.
  10. The Licensee shall limit any in-stream activity to low water periods. In-stream activity is prohibited during fish migration.
  11. The Licensee shall locate stream crossings to minimize approach grades. Approaches shall be stabilized during construction and upon completion of the project, to control runoff, erosion and subsequent siltation to any water body.
  12. Machinery is not permitted to travel up the stream bed and fording of any water body is to be kept to a minimum and limited to one area and a one-time event. Equipment used should be well cleaned and free of oil and grease and maintained free of fluid leaks.
  13. The Licensee shall ensure that pollutants from machinery fording the crossings do not enter water
  14. The Licensee shall ensure that all fill material used during construction is from an approved source and shall be free of contaminants.
  15. To minimize impacts on surface drainage, the Licensee shall prepare all sites in such a manner as to prevent rutting of the ground surface.
  16. Equipment storage holding areas should be located on gravel, sand or other durable land, a distance of at least thirty-one (31) metres above the ordinary high water mark of any water body in order to minimize impacts on surface drainage and water quality.
  17. The Licensee shall designate an area for the deposition of excavated and stockpiled materials that is at least thirty-one (31) metres above the ordinary high water mark of any water body.

18. The Licensee shall not utilize any equipment or vehicles in the course of this undertaking unless the ground surface is in a state capable of fully supporting the equipment or vehicles without rutting or gouging. Overland travel of equipment or vehicles shall cease if rutting occurs.

#### **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 may, for the purpose of geotechnical investigations as describe in the application for Amendment No.2 to previous Licence 2BB-MRY0710, carry out drilling activities within thirty (30) metres of the high water mark of any water body, provided that such activities are consistent with the terms of this Licence and a request has been submitted and received by the NWB, ten (10) days in advance of drilling, that includes a thorough description of the proposed activities and the following:
  - a. An appropriate scaled site map, complete with approximate GPS coordinates of planned drilling locations and the associated water bodies;
  - b. Locations of waste deposition, that are consistent with Part F, Item 4, and
  - c. Mitigation measures that are planned to be in place, prior to, during drilling and following if required to protect waters.
3. The Licensee shall analyze the geochemical constituents of drill cores as follows:
  - a. That reflects actual conditions and is truly representative of the drilling program for all constituents that may impact waters as determined, and clearly qualified, by a Geochemist registered in Nunavut;
  - b. All assumptions, and any limitation to each assumption, in determining a representative sampling population reflecting actual conditions and the geochemical testing methods employed;
  - c. Includes all raw data and an accompanying summary table of the geochemical analysis;
  - d. Define clear conclusions on the results of the geochemical analysis; and
  - e. Present the geochemical analysis in the Annual Report as required by Part B, Item 6(f).
4. The Licensee shall dispose of all drill waste, including water, chips, muds and salts (CaCl<sub>2</sub>) in any quantity or concentration, from land-based drilling, 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.



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. 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 to NWB, including the location (GPS coordinates) and dates.
7. If the bottom of the permanently frozen ground, or permafrost, is broken through by the drill, the depth of the bottom of permafrost and location should be reported in the annual report to the Board for data management purposes.
8. For “on-Ice” drilling where drill additives are not being used, return water released must be non-toxic, and not result in an increase in total suspended solids in the immediate receiving waters above the Canadian Council of Ministers of the Environment, Guidelines for the Protection of Freshwater Aquatic Life (i.e. 10 mg/L for lakes with background levels under 100 mg/L or 10% for those above 100 mg/L).
9. The Licensee shall establish water quality conditions prior to and upon completion of any drilling program through lake ice.

#### **PART G: CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING**

1. The Board has approved the Plan entitled “Spill Contingency Plan,” revised March 31, 2010 that was submitted as additional information with the 2009 Annual Report.
2. ~~The Licensee shall provide a report, to be approved by the Board, within ninety (90) days of issuance of the licence, appropriately qualified by an Engineer registered in Nunavut, which clearly details that the requirements of the CCME guidance document “Aboveground Storage Tank Systems for Petroleum and Allied Petroleum Products (2003)” have been met by the Licensee.~~
3. The Licensee shall prevent any chemicals, petroleum products or wastes associated with the project from entering 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.
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 approved 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 H: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION OR TEMPORARY CLOSING**

1. The Board has approved the Plan entitled “2010 Abandonment and Reclamation Plan”, dated March 31, 2010, submitted as additional information with the Application.
2. The Licensee shall submit within thirty (30) days from the issuance of this Licence, an addendum to the Plan referred to in Part H, Item 1, to address the following:
  - a. Include a site map depicting site spill kits, nearby water bodies, camp infrastructure and other relevant information; and
  - b. Include procedures for conducting site assessments prior to temporary closure of the site.<sup>3</sup> Licensee shall complete all restoration work prior to the expiry of this Licence.
4. The Licensee shall carry out progressive reclamation of any components of the project no longer required for the Licensee’s operations.
5. The Licensee shall backfill and restore, to the satisfaction of an Inspector, all sumps to the pre-existing natural contours of the land.
6. The Licensee shall remove from the site, all infrastructure and site materials, including but not limited to, all fuel caches, drums, barrels, buildings and contents, docks, water pumps and lines, material and equipment prior to the expiry of this Licence.
7. All roads and airstrips, if any, shall be re-graded to match the natural contour in order to reduce erosion.

8. The Licensee shall, unless otherwise identified within the approved Plan under Part H, Item 1, remove all Culverts and open the natural drainage channel. In carrying out this activity, measures shall be implemented to minimize erosion and sedimentation.
9. 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.
10. Areas that have been contaminated by hydrocarbons from normal fuel transfer procedures shall be reclaimed 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.
11. The Licensee shall restore all drill holes and disturbed areas to natural conditions immediately upon completion of the drilling. The restoration of drill holes must include the removal of any drill casing materials and the capping of holes with a permanent seal.
12. The Licensee may store drill cores 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.
13. The Licensee shall contour and stabilize all disturbed areas to a pre-disturbed state upon completion of work.

**PART I: CONDITIONS APPLYING TO THE MONITORING PROGRAM**

1. The Licensee shall submit to the Board for approval within ninety (90) days of the issuance of this licence a revised Environmental Monitoring Plan, which addresses but is not limited to the following:
  - a. Comments and recommendations made by intervening parties including Environment Canada (EC) during review of the plan submitted October 7, 2007.

2. ~~The Licensee shall, at a minimum, maintain Monitoring Stations at the following locations:~~

Monitoring Program Station Number	Description	Status
<del>MRY-1</del>	<del>Water supply for the Mary River Camp at Camp Lake</del>	<del>Active Volume</del>
<del>MRY-2</del>	<del>Summer water supply for the Milne Inlet Camp at Phillips Creek</del>	<del>Active Volume</del>
<del>MRY-3</del>	<del>Winter water supply for the Milne Inlet Camp at Km 99 Lake</del>	<del>Active Volume</del>
<del>MRY-4</del>	<del>Mary River Camp sewage discharge at the WWTF</del>	<del>Active</del>
<del>MRY-4a</del>	<del>Mary River Camp sewage discharge from the PWSP</del>	<del>Active</del>
<del>MRY-5</del>	<del>Milne Inlet Camp sewage discharge at the WWTF</del>	<del>Active</del>
<del>MRY-5a</del>	<del>Milne Inlet Camp sewage discharge from the PWSP</del>	<del>Active</del>
<del>MRY-8</del>	<del>Minewater and surface drainage either pumped or released from Hematite Open Pit</del>	<del>Active</del>
<del>MRY-9</del>	<del>Minewater and surface drainage either pumped or released from the Magnetite Open Pit</del>	<del>Active</del>
<del>MRY-10</del>	<del>Surface discharge from the weathered ore stockpile</del>	<del>Active</del>
<del>MRY-11a</del>	<del>Non-Hazardous Waste Landfill Downstream, location a</del>	<del>Active</del>
<del>MRY-11b</del>	<del>Non-Hazardous Waste Landfill Downstream, location b</del>	<del>Active</del>
<del>MRY-12</del>	<del>Surface discharged from the lump ore and fine ore stockpile at the processing area</del>	<del>Active</del>
<del>MRY-13</del>	<del>Surface discharge from the lump ore and fine ore stockpile at the Milne Inlet</del>	<del>Active</del>

3. ~~The Licensee shall locate, with the assistance of the Inspector where necessary, Monitoring Station numbers MRY-11a and MRY-11b, located downstream of the Non-Hazardous Waste Landfill as identified in the Environmental Monitoring Plan referred to in Part I, Item 1.~~

4. ~~The Licensee shall sample at Monitoring Program Stations MRY 4 and MRY 5 every four (4) weeks during discharge and at Monitoring Stations MRY 4a and MRY 5a, once prior to discharge and every four (4) weeks thereafter. Samples shall be analyzed for the following parameters:~~

~~Biochemical Oxygen Demand—BOD Total Suspended Solids~~

~~pH~~

~~Faecal Coliforms~~

~~Oil and Grease (visual)~~

5. ~~The Licensee shall conduct toxicity testing on treated sewage effluent at the final discharge points at the Monitoring Station(s) MRY 4 and/or MRY 4a; and MRY 5 and/or MRY 5a, 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 *Daphnia magna* (as per Environment Canada's Environmental Protection Series Biological Test Method EPS/1/RM/14).~~

6. ~~The Licensee shall sample at:~~

- a. ~~Monitoring Program Stations MRY 6 and MRY 7 monthly during removal of water from the facilities as required by Part D, Item 20; and~~
- b. ~~Monitoring Program Stations MRY 8, MRY 9, MRY 10, MRY 11a and MRY 11b and MRY 12 and MRY 13, monthly and during period of observed flows as required by Part D, Item 12 and 21.~~

7. ~~The Licensee shall analyze the samples obtained at Monitoring Program Stations MRY 11a and MRY 11b for the following parameters:~~

~~pH Alkalinity~~

~~Conductivity~~

~~Total Dissolved Solids (TDS)~~

~~Total Suspended Solids (TSS)~~

~~Oil & Grease~~

~~Phenols~~

~~Total Organic Carbon (TOC)~~

~~Dissolved Organic Carbon (DOC)~~

~~Total Trace metals as determined by a standard ICP Scan (to include at a minimum, the following elements: Al, Sb, Ba, Cd, Cr, Co, Cu, Fe, Pb, Li, Mn, Mo, Ni, Se, Sn, Sr, Tl, Ti, U, V, Zn); and~~

~~Trace Arsenic and Mercury~~

8. The Monitoring Program and compliance dates specified in the Licence may be modified at the discretion of the Board.
9. The Licensee shall measure and record, in cubic metres, the daily volume of water utilized for camp, drilling and other purposes.
10. An Inspector may impose additional monitoring requirements.
11. The Board has accepted the Quality Assurance/Quality Control Plan (QA/QC), dated March 31, 2008 and the Analyst approval for the document dated May 25, 2009. The Licensee is required to submit to the Board for review, within ninety (90) days from the date of issuance of this Licence, an updated stand-alone QA/QC Plan taking into consideration Part I, Items 14 and 15, along with a letter of approval from an Analyst.
12. The approved Quality Assurance/Quality Control Plan shall be submitted to the Board for review and implemented as approved by an Analyst.
13. The Licensee 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.
14. 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.
15. All analyses shall be performed in a laboratory accredited according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.
16. The Licensee shall measure and record the following:
  - a. the quantities, in cubic metres, of domestic waste, sewage, and hazardous waste hauled off-site for disposal;
  - b. the location and name of the disposal facility for each waste type noted above; and
  - c. the date that each waste type was hauled off-site for disposal, for each occasion that these are removed from the site.
17. 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. The Licensee shall report these coordinates to the Inspector prior to utilizing water.
18. The Licensee shall determine the GPS co-ordinates (in degrees, minutes and seconds of latitude and longitude) of all locations of temporary and permanent storage areas where wastes associated with camp, drilling and Infrastructure operations are deposited. The Licensee shall report these coordinates to the Inspector prior to depositing waste.

19. ~~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, all the monitoring requirements under this Part.~~
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 in writing.
21. The Licensee shall obtain representative samples of the water column below any ice, where required under Part F, Items 8 and 9. Monitoring shall include, at minimum the following:
  - Total Suspended Solids
  - Electrical Conductivity
  - pH
  - Total Trace metals as determined by a standard ICP Scan (to include at a minimum, the following elements: Al, Sb, Ba, Cd, Cr, Co, Cu, Fe, Pb, Li, Mn, Mo, Ni, Se, Sn, Sr, Tl, Ti, U, V, Zn); and
  - Trace Arsenic and Mercury
22. Licensee shall include in the Annual Report required under Part B, Item 6 all data, monitoring results and information required by this Part.

**PART J: CONDITIONS APPLYING TO CONSTRUCTION AND 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. such Modifications are consistent with the NIRB Screening Decision;
  - iv. 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
  - v. the Board has not rejected the proposed Modifications.
2. Modifications for which all of the conditions referred to in Part J, 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.



