





**WATER LICENCE NO: 2AM-MRY1325**



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## Nunavut Water Board | WATER LICENCE NO: 2AM-MRY1325

### Licence No. 2AM-MRY1325

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)

SUITE 1016 – 120 ADELAIDE STREET WEST, TORONTO, ONTARIO M5H 1T1

(Mailing Address)

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

|                                       |                                                                                                                                                                               |
|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Licence Number/Type:                  | <u>2AM-MRY1325 TYPE "A"</u>                                                                                                                                                   |
| Water Management Area:                | <u>GIFFORD (21) &amp; ECLIPSE SOUND (48) WATERSHEDS</u>                                                                                                                       |
| Location:                             | <u>MARY RIVER PROJECT<br/>QIKIQTANI REGION, NUNAVUT</u>                                                                                                                       |
| Purpose:                              | <u>WATER USE AND THE DEPOSIT OF WASTE</u>                                                                                                                                     |
| Description:                          | <u>MINING AND MILLING UNDERTAKING</u>                                                                                                                                         |
| Quantity of Water not to be Exceeded: | <u>580,000 CUBIC METRES <i>PER ANNUM</i> DURING THE<br/>PROJECT CONSTRUCTION PHASE;<br/><br/>230,000 CUBIC METRES <i>PER ANNUM</i> DURING THE<br/>PROJECT OPERATION PHASE</u> |
| Date Licence Issuance:                | <u>JUNE 10, 2013</u>                                                                                                                                                          |
| Expiry of Licence:                    | <u>JUNE 10, 2025</u>                                                                                                                                                          |

This Licence issued (**Motion Number 2013-10-P4-05**) and recorded at Gjoa Haven, Nunavut includes and is subject to the annexed conditions.

**Thomas Kabloona**  
Nunavut Water Board  
Chair

**APPROVED  
BY:**

**Minister of Aboriginal Affairs and  
Northern Development Canada**

**DATE LICENCE APPROVED:** \_\_\_\_\_



## **PART A SCOPE, DEFINITIONS AND ENFORCEMENT**

### **1. SCOPE**

- a. This Licence authorizes Baffinland Iron Mines Corporation (“BIMC” or “Licensee”) to use Water and deposit Waste in support of a Mining and Milling Undertaking at the Mary River Project (Project) as outlined in the Type “A” Water Licence Application (Application) submitted to the Nunavut Water Board (NWB) on February 17, 2012 and as reviewed throughout the regulatory process.

The Mary River Project is located at the following general geographical coordinates:

| <b>Project Extents</b>      | <b>Latitude</b>  | <b>Longitude</b> |
|-----------------------------|------------------|------------------|
|                             | 72° 05' 00" N    | 77° 45' 00" W    |
|                             | 72° 05' 00" N    | 81° 00' 00" W    |
|                             | 69° 49' 00" N    | 81° 00' 00" W    |
|                             | 69° 49' 00" N    | 77° 45' 00" W    |
| <b>Camp</b>                 | <b>Latitude</b>  | <b>Longitude</b> |
| Milne Port Camp             | 71° 52' 53.06" N | 80° 54' 4.36" W  |
| Mine Site Exploration Camp  | 71° 19' 30" N    | 79° 22' 40" W    |
| Mine Site Construction Camp | 71° 18' 50.39" N | 79° 17' 11.35 W  |
| Mine Site Permanent Camp    | 71° 18' 50.39" N | 79° 17' 11.35 W  |
| Ravn River Camp             | 71° 07' 49.25" N | 78° 22' 2.76" W  |
| Mid-Rail Camp               | 70° 58' 20" N    | 78° 22' 15" W    |
| North Cockburn Camp         | 70° 34' 58.11" N | 78° 21' 28.80" W |
| South Cockburn Camp         | 70° 27' 52.47" N | 78° 22' 24.13" W |
| Steensby New Camp           | 70° 19' 1.42" N  | 78° 25' 48.6" W  |
| Steensby (Existing Camp)    | 70° 17' 40.55" N | 78° 29' 21.88" W |
| Steensby (46 Person Camp)   | 70° 19' 36.92" N | 78° 29' 9.30" W  |

The Licensee is allowed to undertake construction, operations, and closure including reclamation, of an open-pit iron ore mine and related infrastructure and facilities at the Mary River Project (Project), located within the Qikiqtani Region of Nunavut. The activities and facilities under the scope of the Project include the following:

- Water supply for domestic uses and industrial purposes at the Milne Port (Milne Inlet) Site, Mine (Mary River) Site, Steensby Port (Steensby Inlet) Site and the railway camps;
- Site drainage and surface water management for the Milne Port Site, Mine Site, Steensby Port Site, and relevant minor project sites;
- Sewage Treatment Facilities for the Milne Port camp, the Mine Site exploration, construction and permanent camps; the Steensby Port construction and permanent camps and the railway camps;



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- Oily water treatment facilities for wastewater and oily storm water treatment for maintenance facilities and fuel storage berms at the Milne Port Site, the Mine Site and Steensby Port Site;
- Storage and management of hazardous materials at the Milne Port Site and Mine Site;
- Landfarm Facilities for the deposition and treatment of hydrocarbon contaminated snow and soil at the Milne Port Site, the Mine Site and Steensby Port Site;
- Fuel tanks, dispensing storage facilities and associated secondary containment areas or berms for the Bulk Fuel Storage Facilities and day tanks at the Milne Port Site, the Mine Site, and the Steensby Port Site;
- Containment areas for temporary storage of hazardous/nonhazardous was (waste transfer areas) and new product storage for drums and totes at Milne Port Site, the Mine Site and Steensby Port Site;
- Ongoing decommissioning of existing and historic camp infrastructure (Fuel bladder farm and ancillary facilities, etc.) at the Milne Port Site;
- Explosives storage and explosives manufacturing facilities at the Mine Site and Steensby Port Site;
- Waste sorting facilities and temporary storage facilities for hazardous wastes at the Mine site;
- Landfills for disposition of solid waste at the Mine Site and Steensby Port Site
- Incinerator Systems for camp and combustible wastes at the Milne Port Site, the Mine Site, Steensby Port Site and railway construction camps;
- Waste rock stockpile and waste rock pile runoff management at the Mine Site;
- Ore Stock pile runoff management at the Mine Site & the Steensby Port Site;
- Secondary Containment for fuel storage and hazardous materials (if any) at each rail camp location;
- Waste Disposal Facilities for each proposed camp along the railway corridor;
- Water course crossings including pipelines, jetties, bridges; roads associated with channel; and bank alterations, culverts, spurs, erosion control, and, artificial accretion;
- Flood control, diversions, alteration of flow or storage by means of dykes or dams;
- Ongoing inspection and maintenance of all water course crossings and associated infrastructure;
- Tote Road (approximately 100 km all-weather road), which extend from the Mine Site to Milne Port Site in its current form except for routine maintenance and minor upgrades for the transportation of equipment during the Construction Phase of the project;
- Ongoing activities in support of engineering and scientific studies for the Project;
- Ongoing maintenance to existing project infrastructure;



- b. This Licence is issued subject to 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 Act, or other statutes imposing more stringent conditions relating to the quantity, type or manner under which any such Waste may be so deposited, this Licence shall be deemed to be subject to such requirements.
- c. Compliance with the terms and conditions of this Licence does not absolve the Licensee from responsibility for compliance with all applicable legislation, guidelines and directives.

## **2. DEFINITIONS**

- a. The Licensee shall refer to Schedule A for definitions of terms used in this Licence.

## **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.
- c. For the purpose of enforcing this Licence and with respect to the use of Water and deposit 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 laws.



**PART B**      **GENERAL CONDITIONS**

1. This Licence incorporates the entire scope of the Type “B” Licence 8BC-MRY1314 issued for the Mary River Site Preparation Project and the scope of Type “B” Licence 2BB-MRY1114 issued for the Mary River Project exploration and bulk sampling programs, excluding the activities and facilities outlined in the Application. To the extent that any reports, studies or plans that have not yet been received and/or approved by the Board, the requirements associated with these reports, studies and/or plans are now brought forward as requirements under this Licence.
2. In the event of a conflict between the previously issued Type “B” licences and this Type “A” Licence, the terms and conditions of this Type “A” Licence prevail.
3. The amount of Water use fees shall be determined and payment of those fees shall be made in accordance with section 12 of the “Regulations”.
4. The Licensee shall file an Annual Report with the Board no later than March 31<sup>st</sup> in the year following the calendar year being reported. The Annual Report shall be developed in accordance with Schedule B.
5. The Licensee shall maintain a copy of this Licence at the sites of operation at all times in English, Inuktitut and French.
6. Any communication with respect to this Licence shall be made in writing to the attention of:  

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)
7. Any notice made to an Inspector shall be made in writing to the attention of:  

Water Resources Officer  
Nunavut District, Nunavut Region  
P.O. Box 100  
Iqaluit, NU X0A 0H0  
Telephone: (867) 975-4295  
Fax: (867) 979-6445
8. The Licensee shall submit one (1) paper copy and one (1) electronic copy of all reports, studies, and plans to the Board or as otherwise requested by the Board. Reports or





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studies submitted to the Board by the Licensee shall include an executive summary in English, Inuktitut and French.

9. This Licence is assignable as provided in section 44 of the Act.
10. The Licensee shall notify the NWB of any changes in development plans or conditions associated with this project, including the intent to begin the Operations Phase, at least sixty (60) days prior to any such change.
11. The Licensee shall post signs in the appropriate areas to inform the public of the location of infrastructure and/or facilities designed to contain, withhold, divert or retain Water and/or Waste. All signs must be in English, Inuktitut and French.
12. The Licensee shall, for all Plans submitted under this Licence, include a proposed timetable for implementation. Plans required to be submitted for Board approval, cannot be undertaken without subsequent written Board approval and direction. The Board may alter or modify a Plan if necessary to achieve the objectives of the Licence or other regulatory instruments. For plans submitted for Board approval, the Board will notify the Licensee in writing of the Board's approval, rejection or alteration of the Plan. Plans or drawings submitted to the Board for review and/or comment do not require Board approval prior to implementation, but the Board may request revisions to those Plans.
13. In the event that a Plan submitted for approval is not approved by the Board, the Licensee shall provide a revised version of the Plan to the Board for review within thirty (30) days of notification by the Board.
14. The Licensee shall, for all Plans submitted for approval under this Licence, implement the Plan as approved by the Board in writing. The Board has approved the following Plans for implementation under the relevant sections in the Licence:
  - Baffinland Iron Mines Corporation Mary River Project Emergency Response & Spill Contingency Plan, dated March 28, 2013;
  - Baffinland Iron Mines Corporation Mary River Project Surface Water and Aquatic Ecosystems Management Plan, dated March 2013;
  - Baffinland Iron Mines Corporation Mary River Project Attachment 5: Fresh Water Supply, Sewage and Wastewater Management Plan Appendix 10D-3, dated January 2012;
  - Baffinland Iron Mines Corporation Mary River Project Waste Management Plan for Construction, Operation and Closure, dated April 19, 2013;
  - Baffinland Iron Mines Corporation Mary River Project Attachment 5: Waste Rock Management Plan, dated January 2012;
  - Baffinland Iron Mines Corporation Mary River Project Attachment 5: Environmental Monitoring Plan (EMP) Appendix 10D-12, dated January 2012;



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- Baffinland Iron Mines Corporation Mary River Project Attachment: 5 Environmental Protection Plan Appendix 10B, dated January 2012;
  - Baffinland Iron Mines Corporation Mary River Project Borrow Pit and Quarry Management Plan Appendix 10D-6, dated February 2012;
  - Baffinland Iron Mines Corporation Mary River Project Operations and Management Plan Milne Inlet Quarry (Q1), dated January 12, 2012;
  - Baffinland Iron Mines Corporation Mary River Project Operations and Management Plan Mary River Mine Site Quarry (QMR2) dated January 12, 2012;
  - Baffinland Iron Mines Corporation Mary River Project Operations and Management Plan Steensby Inlet Quarry (QS2), dated January 12, 2012;
  - Baffinland Iron Mines Corporation Mary River Project Quarry Operations and Management Plan: Quarry Q7 + 500, dated January 11, 2012;
  - Baffinland Iron Mines Corporation Mary River Project Quarry Operations and Management Plan: Quarry Q133 +500, dated January 11, 2012;
  - Baffinland Iron Mines Corporation Mary River Project Quarry Operations and Management Plan: Quarry Q77 +200, dated February 2012;
  - Preliminary Mine Closure and Reclamation Plan Appendix 10G, dated February 2012;
  - Baffinland Iron Mines Corporation Mary River Project Hazardous Materials and Hazardous Waste Management Plan, dated April 22, 2013;
  - Aquatic Effects Monitoring Program Framework, dated February 2013.
15. The Licensee shall update and revise, for submission to the Board for review, within sixty (60) days of issuance of this Licence, the following management plans. The updates are to take into account commitments made with respect to submissions received during the preliminary and technical review of the Application documents, as well as final submissions and issues raised during the Public Hearing Process, where applicable.
- a. Baffinland Iron Mines Corporation Mary River Project Surface Water and Aquatic Ecosystems Management Plan, dated March 2013;
  - b. Baffinland Iron Mines Corporation Mary River Project Emergency Response & Spill Contingency Plan, dated March 28, 2013;
  - c. Baffinland Iron Mines Corporation Mary River Project Attachment 5: Fresh Water Supply, Sewage and Wastewater Management Plan Appendix 10D-3, dated January 2012;
  - d. Baffinland Iron Mines Corporation Mary River Project Waste Management Plan for Construction, Operation and Closure, dated April 19, 2013; and
  - e. Baffinland Iron Mines Corporation Mary River Project Hazardous Materials and Hazardous Waste Management Plan, dated April 22, 2013.
16. Every Plan to be carried out pursuant to the terms and conditions of this Licence shall become a part of this Licence, and any additional terms and condition imposed upon approval of a Plan by the Board become part of this Licence. All terms and conditions of the Licence should be contemplated in the development of a Plan where appropriate.



17. The Schedules attached to this Licence provide instructive details regarding the requirements associated with specific terms and conditions in the main body of the Licence and are provided in the Schedule to provide greater clarity and as an aid to interpretation for the Licensee. If the Board subsequently determines that an item in the Schedule requires revision in order to better reflect the intent and objectives of the Licence, the Board may, in its discretion, and upon providing written notice to the Licensee of the revision, revise the item in the Schedule. Unless the Board directs otherwise, such a revision to an Item in the Schedule will not be considered to be an “amendment” to the Licence.
18. The Licensee shall review the Plans or Manuals referred to in this Licence as required by changes in operation and/or technology and modify the Plans or Manuals accordingly. Revisions to the Plans or Manuals are to be submitted in the form of an Addendum to be included with the Annual Report required by Part B, Item 4, complete with a revisions list detailing where significant content changes are made.
19. The Licensee shall confirm that all document(s) or correspondence submitted by the Licensee to the Board is received and acknowledged by the Manager of Licensing.
20. The expiry or cancellation of this Licence does not relieve the Licensee from any obligation imposed by the Licence, or any other regulatory requirement.



**PART C      CONDITIONS APPLYING TO SECURITY**

1. Subject to the conditions set out in Part C, Items 2 and 3, the Licensee shall furnish and maintain security with the Minister in the form that is satisfactory to the Minister or that is in accordance with the applicable regulations, in the following amounts:
  - a. within thirty (30) days from the approval of this licence, post additional security in the amount of a further \$4,311,784 so that an initial total security amount of thirty six million dollars (\$36,000,000), representing the 2013 year estimate of anticipated mine closure and reclamation costs is posted with the Minister and the Qikiqtani Inuit Association as outlined in the Board's Reasons for Decision; and
  - b. for each subsequent year, the amount of security to be held under this Part shall be reviewed by the Board in accordance with the requirements of Schedule C and adjusted to reflect the results of the Annual Security Review conducted in accordance with Schedule C.
2. Where the Licensee files evidence, in writing with the Board and with notice to the Minister and the Qikiqtani Inuit Association that the Licensee has furnished and maintained security with the Qikiqtani Inuit Association in an amount that the Qikiqtani Inuit Association confirms is sufficient to secure the mine closure and reclamation costs (including cumulative and legacy liabilities) estimated for the upcoming year to be required for the portion of the Project located on Inuit-owned lands, the Board may reduce the amount of security required to be held under Part C, Item 1. The Board shall ensure that the reduced amount of security furnished under Part C, Item 1 is equal to the estimated anticipated mine closure and reclamation costs (including cumulative and legacy liabilities) for the portion of the Project located on Crown-owned lands for the upcoming year.
3. In addition to the Annual Security Review set out in Schedule C, the Licensee may, at any time, submit to the Board for consideration and approval, a request to change the amount of security outlined in Part C, Item 1. The submission shall include supporting evidence to justify the request and the Minister and the Qikiqtani Inuit Association will be consulted by the Board during the Board's consideration of this request.
4. The security furnished and maintained with the Minister in Part C, Item 1 shall be maintained until such time as it is fully or in part refunded by the Minister pursuant to section 76(5) of the Act. This clause shall survive the expiry of this Licence or renewals thereof and until full and final reclamation has been completed to the satisfaction of the Minister.
5. If the Board determines it to be necessary, or upon the request of the Licensee, the Minister or the Qikiqtani Inuit Association, the Board may issue further directions under this Part with respect to the amount of security to be furnished and maintained under the Licence.



**PART D**      **CONDITIONS APPLYING TO CONSTRUCTION AND OPERATIONS**

1. All final design and construction drawings shall be stamped and signed by a Professional Engineer.
2. The Licensee shall submit to the Board for review and acceptance, at least sixty (60) days prior to construction or in a timeframe otherwise approved by the Board in writing, final design and for-construction drawings, stamped and signed by a Professional Engineer, for all infrastructure and/or facilities designed to contain, withhold, divert or retain Water and/or Waste including the following:
  - Bulk Fuel Storage Facilities;
  - Explosives Facilities;
  - Incineration Systems;
  - Landfarm Facilities;
  - Landfill Facilities;
  - Oily Water and/or Wastewater Treatment Facilities;
  - Sewage Treatment Facilities;
  - Site Drainage and Surface Water Management Systems;
  - Waste Management Facilities (including temporary and permanent structure for hazardous and non-hazardous waste);
  - Water Supply Facilities;
  - Water crossings including, pipelines, bridges and roads; and
  - Watercourse training, flood control; diversions.
3. The Licensee shall submit to the Board for approval, at least sixty (60) days prior to completion of construction, an addendum to the Fresh Water Supply, Sewage and Wastewater Management Plan that addresses operational aspects of the Sewage Treatment Facilities and Wastewater Treatment Facilities, 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*”, where applicable. This Manual shall include contingency measures in the event of facility malfunction, disposal of sludge and any other operational and maintenance procedures for those facilities.
4. Quarrying activities shall be conducted in accordance with all applicable legislation, guidelines and industry standards including the *Northern Land Use Guidelines, Pits and Quarries* (INAC, 2009).
5. The Licensee shall implement sediment and erosion control measures, as required, prior to and during the Construction and Operations Phases of the Mary River Project to prevent and/or minimize sediment loading into Water.



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6. The Board has approved, with the issuance of the Licence, the following plans:
  - a. Baffinland Iron Mines Corporation Mary River Project Borrow Pit and Quarry Management Plan Appendix 10D-6, dated February 2012;
  - b. Baffinland Iron Mines Corporation Mary River Project Operations and Management Plan Milne Inlet Quarry (Q1), dated January 12, 2012;
  - c. Baffinland Iron Mines Corporation Mary River Project Operations and Management Plan Mary River Mine Site Quarry (QMR2) dated January 12, 2012;
  - d. Baffinland Iron Mines Corporation Mary River Project Operations and Management Plan Steensby Inlet Quarry (QS2), dated January 12, 2012;
  - e. Baffinland Iron Mines Corporation Mary River Project Quarry Operations and Management Plan: Quarry Q7 + 500, dated January 11, 2012;
  - f. Baffinland Iron Mines Corporation Mary River Project Quarry Operations and Management Plan: Quarry Q133 +500, dated January 11, 2012; and
  - g. Baffinland Iron Mines Corporation Mary River Project Quarry Operations and Management Plan: Quarry Q77 +200, dated February 2012.
7. The Licensee shall submit to the Board for review, an addendum to the Plan referred to in Part D, Item 6a for any quarry site selected for future development that the plan does not adequately address. If the content of the existing quarry plan referred to under Part D, Item 6a, does not adequately address the proposed activities for the management requirements of the selected Quarry site, the Licensee shall submit to the Board for approval, a site-specific Quarry management plan.
8. The Licensee shall inspect daily, the Mary River Project areas affected by construction activities for signs of erosion.
9. The Licensee shall implement preventive and mitigation measures to prevent any Wastes associated with the undertaking from entering any Water bodies.
10. The Licensee shall locate equipment storage areas on gravel, sand or other durable land, at 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.
11. The Licensee shall minimize disturbance to terrain, permafrost and drainage during movement of contractor's equipment and personnel around the site, including the railway corridor, during Construction, Operations and Closure Phases of the Project.
12. The Licensee shall not store material on the surface of frozen streams or lakes except what is required for immediate use.
13. The Licensee shall use fill material for construction from approved sources that been demonstrated by appropriate geochemical analyses to not produce Acid Rock Drainage and to be Metal Leaching properties.



14. The Licensee shall maintain a minimum of thirty-one (31) metre undisturbed buffer zone between the periphery of Quarry sites and the ordinary High Water Mark of any water body unless otherwise approved by the Board in writing. The Licensee shall not excavate and/or remove material from any Quarry beyond a depth of one (1) meter above the ordinary High Water Mark or above the groundwater table, to prevent the potential contamination of groundwater unless otherwise approved by the Board in writing. The Licensee shall construct and operate the Mine Site and associated infrastructure and facilities in accordance with all applicable legislation and industry standards.
15. All surface runoff from Quarry activities for the Project, where flow may directly or indirectly enter a Water body, shall be sampled Weekly and not exceed the Effluent quality limits under Part F, Item 16.
16. All surface runoff during the Construction Phase of the Project, where flow may directly or indirectly enter a Water body, shall be sampled Weekly and not exceed the following Effluent quality limits:

Table 1: Effluent quality limits for surface runoff during construction

| <b>Parameter</b>       | <b>Maximum Average Concentration (mg/L)</b> | <b>Maximum Concentration of Any Grab Sample (mg/L)</b> |
|------------------------|---------------------------------------------|--------------------------------------------------------|
| Total Suspended Solids | 50                                          | 100                                                    |
| Oil and Grease         | No Visible Sheen                            | No Visible Sheen                                       |
| pH                     | Between 6.0 and 9.5                         | Between 6.0 and 9.5                                    |

17. The Licensee shall supervise and field check through an appropriately qualified Engineer, all construction of Engineered Structures in such a manner that the project specification can be enforced, and where required, the quality control measures are followed.
18. The Licensee shall submit a construction summary report to the Board, within ninety (90) days following the completion of any structure designed to contain, withhold, divert or retain Waters or Wastes. The construction summary report shall be prepared by an Engineer(s) in accordance with Schedule D, Item 1.
19. The Licensee shall conduct inspections of the earthwork, geological regime, and the hydrological regime of the Project Biannually during the summer or as otherwise approved by the Board in writing. The inspection shall be conducted by a Geotechnical Engineer and the inspection 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.





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20. The Licensee shall prevent any chemicals, fuel or wastes associated with the undertaking from entering any Water body.
21. 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 that impacts on surface drainage is minimized.
22. The Licensee shall undertake necessary corrective measures to mitigate impacts on surface drainage resulting from the Licensee's activities.
23. For the purposes of culvert and bridge installations, the Licensee shall not encroach on the natural channel width by the placement of abutments, footings or armoring below the ordinary High Water Mark.
24. The Licensee shall construct and operate all infrastructure and Facilities designed to contain, withhold, divert or retain Water and/or Waste in accordance with all applicable legislations and industry standards.
25. The Licensee shall construct and operate the Bulk Fuel Storage Facilities in accordance with all applicable legislation and industry standards, including:
  - a. Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products (2003)
  - b. CCME; and
  - c. National Fire Code of Canada (2010).
26. The Licensee shall prevent the deposition of debris or sediment from entering into or onto any water body, with respect to the construction of access roads, site laydown pads and areas or other earthworks. 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.
27. The Licensee shall prevent chemicals or waste associated with undertakings from entering any water body.





**PART E      CONDITIONS APPLYING TO WATER USE AND MANAGEMENT**

1. The Board has approved with the issuance of the Licence, the Plan entitled “Baffinland Iron Mines Corporation Mary River Project Attachment 5: Fresh Water Supply, Sewage and Wastewater Management Plan Appendix 10D-3”, dated January 2012 that was submitted as additional information with the Application.
2. The Board has approved with the issuance of the Licence, the Plan entitled “*Baffinland Iron Mines Corporation Mary River Project Surface Water and Aquatic Ecosystems Management Plan,*” dated March 2013 that was initially submitted as additional information with the Application and subsequently updated in 2013.
3. The Licensee shall obtain all fresh Water for domestic camp use and industrial purposes, during the Construction Phase of the Project, in the amount and from the site and sources as listed in following table, or from sources otherwise approved by the Board in writing. In addition to the source-specific limits prescribed in the table, the Licensee shall not exceed one thousand five hundred and eighty-nine (1,589) cubic metres per day or five hundred and eighty thousand (580,000) cubic metres per year total water use from all sources during the Construction Phase of the Project.

Table 2: Water Use for Domestic and Industrial Purposes during the Construction Phase

| Site                                    | Source                     | Volume                    | Combined Volume              |
|-----------------------------------------|----------------------------|---------------------------|------------------------------|
| Milne Port<br>(Milne Inlet)             | Phillips Creek<br>(summer) | 68.5 m <sup>3</sup> /day  | 25,000 m <sup>3</sup> /year  |
|                                         | Km 32 Lake<br>(winter)     |                           |                              |
| Mine Site<br>(Mary River)               | Camp Lake                  | 657.5 m <sup>3</sup> /day | 240,000 m <sup>3</sup> /year |
| Steensby<br>Port<br>(Steensby<br>Inlet) | ST 347 Km Lake             | 435.8 m <sup>3</sup> /day | 155,400 m <sup>3</sup> /year |
|                                         | 3 km Lake                  |                           |                              |
| Ravn River                              | Camp Lake                  | 145.2 m <sup>3</sup> /day |                              |
| Mid-Rail                                | Nivek Lake<br>(summer)     | 79.5 m <sup>3</sup> /day  |                              |
|                                         | Ravn Camp Lake<br>(winter) |                           |                              |
| Cockburn<br>North<br>(Tunnels<br>Camp)  | Cockburn Lake              | 101.4 m <sup>3</sup> /day |                              |



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|                     |               |                                |                                   |
|---------------------|---------------|--------------------------------|-----------------------------------|
| Cockburn South Camp | Cockburn Lake | 111.1 m <sup>3</sup> /day      |                                   |
|                     | <b>TOTAL</b>  | <b>1,589 m<sup>3</sup>/day</b> | <b>580,000 m<sup>3</sup>/year</b> |

4. The Licensee shall provide notice to the Board, as required under Part B, Item 10, in advance of using fresh Water for domestic camp use and industrial purposes during the Operations Phase of the Project in the amount and from the sources listed in following table or from sources otherwise approved by the Board in writing. In addition to the source-specific limits prescribed in the table that follows, the Licensee shall not exceed six hundred and thirty (630) cubic metres per day or two hundred and thirty thousand (230,000) cubic metres per year for total domestic camp and industrial water use during the Operations Phase of the Project from all water sources.

Table 3: Water Use for Domestic and Industrial Purposes during the Operations Phase

| Site                           | Source                      | Monitoring Program Station | Volume (m <sup>3</sup> /day) |            | Combined Volume (m <sup>3</sup> /day) |
|--------------------------------|-----------------------------|----------------------------|------------------------------|------------|---------------------------------------|
|                                |                             |                            | Domestic                     | Industrial |                                       |
| Milne Port (Milne Inlet)       | Phillips Creek (summer)     | MP-MRY-2                   | 14.8                         | 16.2       | 31                                    |
|                                | Km 32 Lake (winter)         | MP-MRY-3                   |                              |            |                                       |
| Mine Site (Mary River)         | Camp Lake                   | MS-MRY-1                   | 203.8                        | 151.6      | 355.4                                 |
| Steensby Port (Steensby Inlet) | ST 347 Lake permanent camp) | SP-01                      | 101                          | 142.6      | 243.6                                 |
|                                | 3 Km Lake)                  |                            |                              |            |                                       |

5. The Licensee may recycle water and use reclaimed water from the various Treatment Facilities, surface water management ponds and embankment dams and approved discharge locations under the licence if such waters meet appropriate discharge criteria for those facilities.
6. The Licensee shall equip all Water intake hoses with screens of an appropriate mesh size, consistent with the requirements of Fisheries and Ocean Canada's (DFO) *Freshwater Intake End-of-Pipe Fish Screen Guidelines* (1995), to prevent the entrainment of fish and shall withdraw Water at a rate such that fish do not become impinged on the screen.
7. The Licensee shall document separately the use of Waters on, in or flowing through Inuit-owned lands and Crown Lands as required under Part I, Item 15 in the Licence.



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8. Streams cannot be used as a water source unless authorized and approved by the Board in writing.
9. The Licensee shall notify the Inspector and the Board at least ten (10) days in advance of using water from any sources not identified in the Application as required approval as per Part E, Item 8.
10. The Licensee shall update or revise annually following the commencement of the Operations Phase, the Project Blockflow Diagram Water Supply Balance information for the various Project sites, provided with the Application and submit for review of the Board. The submission shall be included with the Annual Report under Part B, Item 4.
11. The Licensee shall carry out weekly inspections of all structures designed to contain, withhold, divert or retain Waters or Wastes during periods of flow and maintain records of the inspections and findings, for review upon the request by the Board or an Inspector.
12. The Licensee shall not remove any material from below the ordinary High Water Mark of any water body unless authorized.
13. The Licensee shall not cause erosion to the banks of any body of Water and shall provide necessary controls to prevent such erosion.
14. The Licensee shall, where the use of water of a sufficient volume would likely result in the drawdown of the source Water body involved or dewatering of the specific Water body is anticipated, submit the following for the approval of the Board in writing:
  - a. the volume of water required;
  - b. a hydrological overview of the water body;
  - c. details of impacts; and
  - d. proposed mitigation measures.
15. The Licensee shall, for winter lake and stream crossings, including ice bridges, construct entirely of water, ice or snow and 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.
16. 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.
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 cut any stream bank or remove any material from below the ordinary High Water Mark of any water body.
19. The Licensee shall undertake appropriate corrective measures to mitigate impacts on surface drainage resulting from the Licensee's operations.
20. The Licensee shall limit any in-stream activity, as much as possible, to low water periods. In-stream activity is prohibited during fish migration.
21. 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.
22. The Licensee shall not permit machinery to travel up the stream bed and fording of any water body is to be kept to a minimum and limited to one area. Equipment used should be well cleaned and free of oil and grease and maintained free of fluid leaks.
23. 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.
24. The Licensee shall provide to the Board for review, for-construction design drawings for stream culverts and bridges designed using DFO's guidelines and to facilitate the passage of fish, thirty (30) days prior to construction.
25. The Licensee shall submit to the Board for review, at least thirty (30) days prior to implementation, copies of separate Blasting Management Plans developed for the mining operation, tunnelling of the railway and blasting near water bodies as committed to during the Public Hearing.



**PART F      CONDITIONS APPLYING TO WASTE DISPOSAL AND MANAGEMENT**

1. The Board has approved with the issuance of the licence, the Plan entitled “*Baffinland Iron Mines Corporation Mary River Project Waste Management Plan for Construction Operation, and Closure*”, dated April 2013.
2. The Board has approved with the issuance of the licence, the Plan entitled “*Baffinland Iron Mines Corporation Mary River Project Attachment 5: Waste Rock Management Plan*,” dated January 2012.
3. The Licensee shall provide a revised Waste Rock Management Plan, as required under Part B, Item 15, that takes into consideration for this and future revisions under this Licence, the following:
  - a. Updates to the on-going Waste Rock Characterization Program (including the further refinement of acid rock drainage and metal leaching aspects of the foot wall and hanging wall;
  - b. Any additional details on the segregation of potentially acid generating waste rock;
  - c. Update to the geochemical modeling;
  - d. Update on pit water quality predictions;
  - e. Results of ongoing humidity cell kinetic testwork;
  - f. The incorporation of on-site test pile program results with respect to ARD/ML and impacts to modeling results; and
  - g. Waste Rock Storage Facilities with consideration for climate change.
4. The Licensee shall provide a revised Waste Management Plan, as required under Part B, Item 15(f), that takes into consideration for this and future revisions under this Licence, the following:
  - a. A Quality Assurance and Quality Control Plan for open burning procedures under this Licence;
  - b. Provide a section and information on the proposed land disposal of dredging waste for the purposes of construction at Milne Port Site and Steensby Port Site, with information on location, amount of materials, method of disposal and any mitigation measures required for the protection of water.
5. The Board has approved with the issuance of the licence, the Plan entitled “*Baffinland Iron Mines Corporation Mary River Project Hazardous Materials and Hazardous Waste Management Plan*”, dated April 22, 2013.
6. 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



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the quality, quantity or flow of water is not impaired, unless otherwise approved by the Board in writing.

7. The Licensee is authorized to dispose of all acceptable food waste, paper waste and untreated wood products in an Incinerator System;
8. The Licensee shall test the bottom ash generated by all Incinerator Systems, by using the acceptable test procedures for analyzing residuals, prior to being disposed of at any Landfill Facility. If the composition of the ash makes it unsuitable for disposal at the Landfill facilities, the Licensee shall direct the Waste to an appropriate facility for disposal. The records of analysis results and volumes of ash shall be maintained and provided to an Inspector upon request.
9. The Licensee shall not open burn plastics, wood treated with preservatives, electric wire, Styrofoam, asbestos or painted wood, to prevent the deposition of waste materials of incomplete combustion and/or leachate from contaminated ash residual, from impacting any surrounding waters, unless otherwise approved by the Board in writing.
10. The Licensee shall treat oily water and wastewater generated by the Project at the Oily Water/Wastewater Treatment Facilities allowed under the scope of the Licence.
11. 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 any community receiving waste from the project, which clearly states that authorization has been granted for the deposit by the Licensee at the Hamlet's appropriately licensed facilities.
12. The Licensee shall provide at least ten (10) days' notice to the Inspector prior to planned Discharges from any Waste Management Facility, Oily Water/Wastewater Treatment Facilities, Sewage Treatment Facilities, and any other relevant facilities associated with the Project. The notice shall include the estimated volume proposed for Discharge and the location and description of the receiving environment.
13. The Licensee shall, unless otherwise approved by the Board in writing, discharge effluent at a distance of least thirty-one (31) metres above the Ordinary High Water Mark of any Water body, where direct flow into the Water body is not possible, such that surface erosion is minimize and no additional impacts are created.
14. The Licensee shall remove any waste generated from temporary and permanent shelters along the tote road and along the railway corridor for treatment at appropriately licenced Waste Management Facilities.
15. The Licensee shall direct all Sewage generated from the relevant Project sites to the Sewage Treatment Facilities or as otherwise approved by the Board in writing.



16. The Licensee shall treat all Sewage waste generated at the Ravn River and Mid-Rail camps and Sewage generated at the Cockburn North and Cockburn South camps at either the Mine Site Sewage Treatment Facility or the Steensby Port Sewage Treatment Facility, unless otherwise approved by the Board in writing.
17. The Licensee shall provide to the Board for review, at least sixty (60) days prior to installation, detailed specifications and operational requirements for the Sewage storage tanks proposed for the Railway camps.
18. All discharge from the Sewage Treatment Facilities including the Polishing Waste Stabilization Ponds directly into fresh Water bodies at Monitoring Stations MP-01, MP-01a, MP-MRY-04, MP-MRY-04a, MS-01, MS-01a, MS-MRY-04, MS-MRY-04a, must not exceed the following Effluent quality limits:

Table 4: Effluent discharge quality limits for Sewage Treatment Facilities to freshwater

| <b>Parameter</b>             | <b>Maximum Concentration of Any Grab Sample</b> |
|------------------------------|-------------------------------------------------|
| BOD <sub>5</sub>             | 30 mg/L                                         |
| Total Suspended Solids       | 35                                              |
| Faecal Coliform              | 1000 CFU/100 mL                                 |
| Oil and Grease               | No visible sheen                                |
| pH                           | Between 6.0 and 9.5                             |
| Ammonia (NH <sub>3</sub> -N) | 4.0 mg/L                                        |
| Total Phosphorous (MS-01)    | 4.0 mg/L                                        |
| Total Phosphorous (MS-01a)   | 1.0 mg/L                                        |
| Toxicity                     | Not acutely toxic                               |

19. All discharge from the Sewage Treatment Facilities including Polishing Waste Stabilization Ponds at Monitoring Stations SP-01, SP-01a directly into the ocean or to ditches flowing into the ocean shall not exceed the following Effluent quality limits:

Table 5: Effluent discharge quality limits for Sewage Treatment Facilities to the ocean

| <b>Parameter</b>       | <b>Maximum Concentration of Any Grab Sample (mg/L)</b> |
|------------------------|--------------------------------------------------------|
| 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                                    |
| Toxicity               | Not acutely toxic                                      |

20. Sludge generated from the Sewage Treatment Facilities or any other facilities shall be confirmed to be non-hazardous and the results provided to the Board for review prior to disposal at any Landfill Facility or as otherwise approved by the Board in writing.





21. All discharge from the Oily Water/Wastewater Treatment Facilities at Monitoring Stations MP-02, MS-02, SP-02 must not exceed the following Effluent quality limits:

Table 6: Effluent discharge quality limits for Oily Water Treatment Facilities

| <b>Parameter</b> | <b>Maximum Average Concentration (mg/L)</b> |
|------------------|---------------------------------------------|
| pH range         | 6 – 9.5                                     |
| TSS              | 35                                          |
| Ammonia          | 4                                           |
| Phosphorous      | 4                                           |
| Benzene          | 0.370                                       |
| Ethylbenzene     | 0.090                                       |
| Toluene          | 0.002                                       |
| Oil and Grease   | 15 and no visible sheen                     |
| Arsenic          | 0.50                                        |
| Copper           | 0.30                                        |
| Lead             | 0.20                                        |
| Nickel           | 0.50                                        |
| Zinc             | 0.50                                        |

22. All discharge from the Landfill Facilities at Monitoring Stations MS-MRY-13a, MS-MRY-13b and SP-08 must not exceed the following Effluent quality limits:

Table 7: Effluent discharge quality limits for the Landfill Facilities

| <b>Parameter</b>       | <b>Maximum Average Concentration (mg/L)</b> |
|------------------------|---------------------------------------------|
| pH                     | 6.0-9.5                                     |
| Total As               | 0.5                                         |
| Total Cu               | 0.3                                         |
| Total Pb               | 0.2                                         |
| Total Ni               | 0.5                                         |
| Total Zn               | 0.5                                         |
| Total Suspended Solids | 15                                          |
| Oil and Grease         | No                                          |

23. All discharge from the Bulk Fuel Storage Facilities at Monitoring Stations MP-03, MP-MRY-7, MS-03, MS-04, MS-MRY-6, SP-04 and SP-05 must not exceed the following Effluent quality limits:



Table 8: Effluent discharge quality limits for the Bulk Fuel Storage Facilities

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

24. All discharge from the Landfarm Facilities at Monitoring Stations MP-04, MS-05 and SP-06 must not exceed the following Effluent quality limits:

Table 9: Effluent discharge quality limits for the Landfarm Facilities

| <b>Parameters</b>      | <b>Maximum Average Concentration (mg/L)</b> |
|------------------------|---------------------------------------------|
| pH                     | 6.0-9.0                                     |
| Total Suspended Solids | 15                                          |
| Oil and Grease         | 15 and no sheen                             |
| Total Lead             | 0.001                                       |
| Benzene                | 0.370                                       |
| Toluene                | 0.002                                       |
| Ethylebenzene          | 0.090                                       |

25. All Discharge from the Bulk Sample Open Pit, Bulk Sample Weathered Ore Stockpile, Bulk Sample Processing Stockpile Area and Bulk Sample Stockpile Area Seepage at Monitoring Stations MS-MRY-09, MS-MRY-10, MS-MRY-11, MP-MRY-12 shall not exceed the following Effluent quality limits:

Table 10: Open Pit, Stockpile and Sedimentation Ponds Effluent discharge quality limits

| <b>Parameter</b>                                           | <b>Maximum Concentration of Any Grab Sample (mg/L)</b> |
|------------------------------------------------------------|--------------------------------------------------------|
| 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                                       |
| Toxicity                                                   | Not acutely toxic                                      |
| The waste discharge shall have a pH of between 6.0 and 9.5 |                                                        |

26. All discharge from the Ponds associated with the Run of Mine Ore Stockpile, Ore Stockpile, West and East Sediment Ponds at Monitoring stations MS-06+, MS-07, MS-08 MS-09 and SP-07 shall not exceed the following Effluent quality limits of Part F, Item 25



27. All Contact Water and surface runoff from the site Drainage and Surface Water Management Systems where flow may directly or indirectly enter a water body, shall be sampled Weekly during the Operations Phase of the Project and must not exceed the following Effluent quality limits:

Table 11: Effluent quality limits for Contact Water during the Operations Phase of the Mary River Project

| <b>Parameter</b>       | <b>Maximum Average Concentration (mg/L)</b> | <b>Maximum Concentration of Any Grab Sample (mg/L)</b> |
|------------------------|---------------------------------------------|--------------------------------------------------------|
| Total Suspended Solids | 15                                          | 30                                                     |
| Oil and Grease         | No Visible Sheen                            | No Visible Sheen                                       |
| pH                     | Between 6.0 and 9.5                         | Between 6.0 and 9.5                                    |

28. The Licensee shall incorporate best management practices including ditches, diversions, sumps and berms where necessary to minimize or prevent surface runoff from entering nearby water bodies from Quarry and borrow pit sites.
29. The Licensee shall remove from the project site, all hazardous wastes generated through the course of the Construction and Operations Phases, for disposal at an approved Waste Disposal Facility.
30. The Licensee shall maintain records of all Waste backhauled from the Mary River Project and confirmation of proper disposal through the use of Waste manifest tracking systems and registration with the Government of Nunavut, Department of Environment. These records shall be made available upon request, to an Inspector or the Board.



**PART G      CONDITIONS APPLYING TO MODIFICATIONS**

1. The Licensee may, without written consent from the Board, carry out Modifications provided that such Modifications are consistent with the terms of this Licence and the following requirements are met:
  - a. The Licensee has notified the Board in writing of such proposed Modifications at least sixty (60) days prior to beginning the Modifications;
  - b. Such Modifications do not place the Licensee in contravention of the Licence or the Act;
  - c. Such Modifications are consistent with the NIRB Project Certificate;
  - d. The Board has not, within 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
  - e. The Board has not rejected the proposed Modifications.
2. Modifications for which any 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. Applications for modifications shall contain:
  - a. A description of the facilities and/or works to be constructed;
  - b. The proposed location of the structure(s);
  - c. Identification of any potential impacts to the receiving environment;
  - d. A description of any monitoring required, including sampling locations, parameters measured and frequencies of sampling;
  - e. Schedule for construction;
  - f. Drawings of engineered structures stamped by a Professional Engineer; and
  - g. Proposed sediment and erosion control measures.
6. 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 EMERGENCY RESPONSE AND CONTINGENCY PLANNING**

1. The Board has approved the Plan entitled “*Baffinland Iron Mines Corporation Mary River Project Emergency and Spill Contingency Plan*” dated March 2013. The Licensee shall submit a revised plan at least sixty (60) days prior to the commencement of Operations that reflect the change in the scope of activities with respect to the Project.
2. 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.
3. The Licensee shall provide secondary containment for fuel and chemical storage as required by applicable standards and acceptable industry practice.
4. The Licensee shall perform weekly inspections of fuel containment facilities for leaks and settlement and shall keep a written log of inspections to be made available to an Inspector upon request.
5. The Licensee shall maintain and service any equipment in designated areas and shall implement special procedures (such as the use of drip pans) to manage waste and contain potential spills.
6. If the Licensee provides notification under Part J, Item 7, the Licensee shall submit to the Board, an Addendum to the Emergency Response Plan and the Spill Contingency Plan, detailing the changes in operations, personnel, responsibilities, availability of equipment and access to the site for assistance.
7. The Licensee shall keep a copy of the Emergency Response Plan and the Spill Contingency Plan at each site of operations.
8. The Licensee shall conduct emergency maintenance and servicing on equipment, in designated areas, and shall implement measures to collect motor fluids and other Waste and prevent and contain spills.
9. If, during the period of this Licence, an unauthorized Discharge of Waste and/or Effluent occurs, or if such Discharge is foreseeable, the Licensee shall:
  - a. Employ as required, the Emergency Response Plan and the Spill Contingency Plan;
  - b. Report the incident immediately via the 24-Hour Spill Reporting Line (867) 920-8130 and to the Inspector at (867) 975-4295; and



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- c. For each spill occurrence, submit a detailed report to the Inspector, no later than thirty (30) days after initially reporting the event, which includes the amount and type of spilled product, the GPS location of the spill, and the measures taken to contain, clean up and restore the spill site.
10. The Licensee shall, in addition to Part H, Item 9, regardless of the quantity of release of a harmful substance, report to the NWT/NU Spill Line if the release is near or into a Water body.
11. The Licensee shall implement measures to prevent or minimize 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) meters from the ordinary High Water Mark of any adjacent water body and inspected on a regular basis.



**PART I**      **CONDITIONS APPLYING TO GENERAL AND AQUATIC EFFECTS MONITORING**

1. The Board has approved with the issuance of the Licence, for the Construction Phase of the Project, the plan entitled “*Aquatic Effects Monitoring Program (AEMP) Framework*”, dated February 2013, applicable during the Construction Phase of the Project. The Licensee shall, upon further consultation, submit a revised AEMP Framework for review of the Board, prior to December 1, 2013, and take into consideration the recommendations received during the final technical review of the Application and submissions received at the public hearing.
2. The Licensee shall submit to the Board, for approval in writing, at least sixty (60) days prior to commencing the Operations Phase of the Project, an Aquatic Effects Management Plan (AEMP) prepared in consultation with interested parties.
3. The Board has approved with the issuance of the licence, the Plan entitled “*Baffinland Iron Mines Corporation Mary River Project Attachment: 5 Environmental Protection Plan Appendix 10B*”, dated January 2012.
4. The Board has approved with the issuance of the licence, the Plan entitled “*Baffinland Iron Mines Corporation Mary River Project Attachment: 5 Environmental Monitoring Plan Appendix 10D-12*”, dated January 2012.
5. The Licensee shall undertake the Monitoring Program as provided in Schedule I.
6. The Licensee shall confirm the locations and GPS coordinates for all Monitoring stations referred to in Schedule I, and any additional monitoring stations that may be required, with an Inspector.
7. 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 the use of Water.
8. 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 and/or deposit of Wastes associated with the Mary River Project. The Licensee shall report these coordinates to the Inspector prior to depositing waste.
9. 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.



10. The Licensee shall install and maintain signs that identify the Monitoring Stations, posted in English, Inuktitut and French.
11. The Licensee shall measure and record the following in cubic metres or as otherwise stated:
  - a. The volume of fresh Water obtained from all water sources associated with the Project. Water quantities from sources in, on or flowing through Crown Lands and those through Inuit-owned lands are to be provided separately;
  - b. The volume, the source and end use of reclaim or recycled water used for any purposes under this licence;
  - c. The volume of Sewage sludge removed from the Sewage Treatment Facilities;
  - d. Tonnes of mineralized and un-mineralized waste rock stored at the end of the calendar year being reported; and
  - e. Tonnes of ore stored at the Project sites at the end of the calendar year and the tonnes of ore shipped annually in relationship to the Project.
12. The Licensee shall undertake a geotechnical inspection on all engineered facilities designed to contain Water or Waste, to be carried out bi-annually by a Geotechnical Engineer, between the months of July and September. The inspection shall be conducted in accordance with the *Canadian Dam Safety Guidelines* where applicable, to include:
  - Pit walls
  - Quarries
  - Landfills
  - Landfarms
  - Bulk Fuel Storage Facilities
  - Sediment Ponds
  - Collection ponds
  - Polishing Waste Stabilization Ponds
13. The Licensee shall submit to the Board, within sixty (60) days of completion of the geotechnical inspection referred to in Part G, Item 12, a Geotechnical Engineer's Report that shall include a cover letter from the Licensee outlining an implementation plan to address the recommendations of the Geotechnical Engineer.
14. The Licensee shall monitor and report to an Inspector, Seepage from all facilities designed to contain, withhold, divert or retain Water or Wastes and submit the results and an interpretation of the Seepage monitoring carried out, in the Annual Report required under Part B, Item 4.
15. The Licensee shall obtain a digital photographic record of all the watercourse crossings before, during, and after the completion of construction as required under Schedule D, Item 1.





16. The Licensee shall submit to an Analyst for approval, within six (6) months of the Licence issuance, an updated Quality Assurance/ Quality Control Plan that includes requirements for sampling and analysis. This Plan shall be developed in accordance with the 1996 *Quality Assurance (QA) and Quality Control (QC) Guidelines for Use by Class "A" Licences (INAC)*.
17. If the Analyst does not approve the Plan referred to in Part I, Item 16, the Licensee shall revise the Plan and resubmit to the Analyst for approval.
18. 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.
19. All sampling, sample preservation and analyses shall be conducted in accordance with methods prescribed in the most current edition of "*Standard Methods for the Examination of Water and Wastewater*" or by other such methods approved by an Analyst.
20. All compliance analyses shall be performed in a Canadian Association for Environmental Analytical Laboratories (CAEAL) accredited laboratory according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.
21. The Licensee shall submit to the Board, within thirty (30) days following the month being reported, a Monthly Monitoring Report. The Report shall include:
  - a. All data and information required by this Part and generated by the Monitoring Program in the tables of Schedule I;
  - b. An assessment of data to identify areas of non-compliance with regulated discharge parameters referred to in Part F;
22. The Licensee shall establish additional Monitoring Stations, as may be required, to effectively and adequately monitor surface runoff from the Mary River Project site(s) or discharge from Site Drainage and Surface Water Management System water associated with the Mary River Project. Within thirty (30) days of establishment of additional Monitoring Stations, the Licensee shall inform the Board and the Inspector.
23. The Licensee shall monitor runoff and/or discharge from borrow pits and rock Quarry sites, on a monthly basis, for the following parameters:
  - Total Suspended Solid (TSS)
  - Oil and Grease
  - Ammonia (total  $\text{NH}_3\text{-N}$ )
  - Nitrate (total  $\text{NO}_3\text{-N}$ )
  - pH



- Conductivity; and
  - Demonstrate to be non-acutely toxic.
24. The Licensee shall, in addition to Part I, Item 23, during periods of flow and following a major precipitation event, conduct opportunistic monitoring, on a monthly basis, on any observed flows related to Effluent quality limits under Part D, Item 16 and the monitoring requirements as established under Part I, Item 23, for any flows originating from borrow pits or rock quarries.
  25. The Licensee shall monitor surface runoff and/or discharge of the monitoring stations downstream of construction areas at Milne Port Site and the Mary River Mine Site as indicted in Table 2 and 3 of Schedule I, to comply with Effluent quality limits under Part D, Item 16.
  26. An Inspector may impose additional monitoring requirements.
  27. A monthly 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
  28. The Licensee shall include in the Annual Report, required under Part B, Item 4, all monitoring results and information required by this Part.
  29. The NWB can modify the Monitoring Program as set out in Schedule I without a public hearing. Requests for changes to the Program should be forwarded to the NWB in writing, and should include the justification for the change.



**PART J**      **CONDITIONS APPLYING TO ABANDONMENT, RECLAMATION AND CLOSURE**

1. The Board has approved, with the issuance of the Licence, the Plan entitled “*Baffinland Iron Mines Corporation Mary River Project Preliminary Mine Closure and Reclamation Plan Appendix 10G*” dated February 2012 as part of the Application.
2. The Licensee shall submit to the Board, for approval in writing, within sixty (60) days prior to the commencement of the Operations Phase of the Project, an Interim Closure and Reclamation Plan prepared in accordance with the *Mine Site Reclamation Guidelines for the Northwest Territories* (2007, INAC) and consistent with the *Mine Site Reclamation Policy for Nunavut* (2002, INAC) and the *Abandonment and Reclamation Policy for Inuit Owned Lands* (the Qikiqtani Inuit Association-Version 2.0). The Plan shall cover mine related components and include the following:
  - a. Detailed description, including maps and other visual representations, of the pre-construction conditions for each site, accompanied by a detailed description of the proposed final landscape, with emphasis on the reclamation of surface drainage over the restored area;
  - b. A description of how progressive reclamation will be employed and monitored throughout the life of the mine, plus reclamation scheduling and coordination of activities with the overall sequence of the project; details of reclamation scheduling and procedures for coordinating reclamation activities within the overall mining sequence and materials balance;
  - c. Implications of any updated water balance and water quality model prediction results and any adaptive management measures that may be required;
  - d. An evaluation of closure and reclamation measures for each mine component, including the goals, objectives, closure criteria and the rationale for selection of the preferred measures;
  - e. A comprehensive assessment of materials suitability, including geochemical and physical characterization and a schedule of availability for reclamation needs. Particular attention shall be given to cover materials, including maps showing sources and stockpile locations of all reclamation construction materials;
  - f. An assessment and description of any required post-closure treatment for pit water that is not acceptable for discharge, taking into consideration further studies completed and updated modeling information;
  - g. Contingency measures for all reclamation components including action thresholds that are linked to the monitoring programs;
  - h. Monitoring programs to assess reclamation performance and environmental conditions including monitoring locations for surface water and Ground Water, parameters;
  - i. Monitoring schedules and overall timeframes;



- j. QA/QC procedures for managing the demolition landfill and other waste disposal areas;
  - k. A list of non-salvageable materials and disposal locations;
  - l. Rock storage facility closure design plans and sections including the types of material placed and volumes;
  - m. Protocol for the disposal of any contaminated soil;
  - n. An assessment of the long-term physical stability of all remaining project components;
  - o. A revised closure and reclamation cost estimate; and
  - p. A detailed implementation schedule for completion of reclamation work
3. The Licensee shall, on an annual basis, provide an annual work plan and updated estimate of anticipated mine closure and reclamation costs for the upcoming year shall in accordance with the requirements of Schedule J.
4. The Licensee shall submit to the Board, for approval in writing, at least twelve (12) months prior to the expected end of mining, a Final Closure and Reclamation Plan. The plan shall incorporate revisions, which reflect the pending closed status of the mine, and include:
  - a. Soil Quality Remediation Objectives along with CCME Guidelines and the Government of Nunavut *Environmental Guideline for Site Remediation*;
  - b. Environmental Site Assessment plans in accordance Canadian Standards Association (CSA) criteria; and
  - c. An evaluation of the Human Health and Ecological Risk Assessment required for the associated closure options.
5. The Licensee shall remediate hydrocarbon contaminated soils associated with the project bladder tank farms and treat to meet the appropriate remedial objectives consistent with the use of the remediated soil as well as the requirements of the Government of Nunavut Guidelines, or as otherwise approved by the Board in writing.
6. The Licensee shall provide to the Board, for approval in writing, at least sixty (60) days prior to commencing reclamation activities at any bulk (fuel bladder) storage facility impacted by hydrocarbon contamination, a remediation action plan that meets at minimum, the 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.
7. 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, unless otherwise identified within the approved Plan under Part J, 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. The Licensee shall contour and stabilize all disturbed areas to a pre-disturbed state upon completion of work.
10. 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.
11. The Licensee shall implement progressive reclamation including re-vegetation as soon as practically possible and shall update all Plans to reflect such measures.
12. 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.
13. The Licensee shall notify the Board in writing, at least sixty (60) days prior to entering into a Care and Maintenance Phase.
14. Within thirty (30) days of the Licensee providing the Board with notification of the Licensee's intention to enter into Care and Maintenance, the Licensee shall provide the Board with a Care and Maintenance Plan that details the Licensee's plans for maintaining compliance with the Terms and Conditions of the Licence.
15. 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.
16. The Licensee shall notify the Board in writing, at least sixty (60) days prior to any intent to achieve Recognized Closed Mine status.



## **PART K      SCHEDULES**

### **Schedule A. Scope, Definitions, and Enforcement**

#### **Definitions**

In this Licence: 2AM-MRY1325

“**Abandonment**” means the permanent dismantlement of a facility with the intent of making the facility permanently incapable of its intended use. This includes the removal of associated equipment and structures;

“**Acid Rock Drainage (ARD)**” means the production of acidic leachate, seepage or drainage from underground workings, open pits, ore stockpiles, waste rock stockpiles, construction rock and other rocks used for other purposes associated with the Project that can lead to the release acidic substances into ground Water or surface Water;

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

“**Acutely Lethal Effluent**” means effluent as defined in the *Metal Mining Effluent Regulations* SOR/2002-222 (2002);

“**Adaptive Management**” means a management strategy that describes a way of minimizing risks associated with uncertainty and provides a flexible framework for mitigation measures to be implemented and actions to be taken when specified thresholds are exceeded;

“**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. It is also considered as an appendix or supplement;

“**Aggregates Sources**” mean existing and/or proposed borrow pits and quarries for use in the construction of facilities and infrastructure for the Mary River Project as identified in the Application.

“**Amendment**” means a change to any terms and conditions of this Licence through application to the NWB, requiring a change, addition, or deletion of specific terms and conditions of the Licence;

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

“**Annually**” means, in the context of monitoring frequency, one sampling event occurring every 365 days with a minimum of 200 days between sampling events;



**“Application”** means the final Type “A” Water Licence Application submitted to the NWB by Baffinland Iron Mines Corporation (BIMC) on February 17, 2012 as part of the Final Environmental Impact Statement (FEIS) for the Mary River Project;

**“Aquatic Effects Monitoring Plan (AEMP)”** means a monitoring program designed to determine the short-term and long-term effects of the Project’s activities on the aquatic environment resulting from the Project, to evaluate the accuracy of impact predictions, to assess the effectiveness of planned impact mitigation measures and to identify additional impact mitigation measures to avert or reduce environmental effects;

**“Batch Concrete Plant”** means mobile or stationary plants used to mix cement, aggregate, and water to produce concrete for footings, foundations, floors and other project facilities and infrastructure described in the Application;

**“Biannual”** means, in the context of monitoring frequency, one sampling event occurring every six (6) months with a minimum of one hundred eighty days between sampling events;

**“Board”** means the Nunavut Water Board (NWB) established under Article 13 of the *Nunavut Land Claims Agreement* and under section 14 of the Act;

**“Borrow Pits”** means sites for which materials, such as gravel or sand, are excavated for the purposes of constructing site infrastructure and facilities for the Mary River Project as described in the Plan entitled *“Baffinland Iron Mines Corporation Mary River Project Borrow Pit and Quarry Management Plan Appendix 10D-6”*, dated February 2012;

**“Bulk Fuel Storage Facilities”** means the permanent fuel storage tanks, containment area and associated appurtenance constructed at the various major project sites, Milne Port, the Mine Site, and Steensby Port, associated with the Mary River Project, for the purposes of offloading, storing and distribution of fuel;

**“Bulk Sample Open Pit”** means the excavated area formed as a result of the Bulk Sampling Program undertaken in 2007-2008 at the Mary River Site;

**“Bulk Sampling Program”** means the activities associated with the ore sample extracted from deposit No.1 during 2007-2008 for the purpose of analysing the ore constituent. The Bulk Sampling Program was allowed under Amendment No. 1 to Licence 2BB-MRY0710 issued by the NWB on July 16, 2007.

**“Bulk Sample Weathered Ore Stockpile”** means the ore stockpile located adjacent to the Bulk Sample Open Pit at the Mary River Site;

**“Canadian Council of the Minister of Environment (CCME)”** means the organizations of Canadian Ministers of Environment that sets guidelines for environmental protection across





Canada such as the Canadian Water Quality Guidelines for the Protection of Freshwater Aquatic Life;

**“Care and Maintenance”** in respect of a mine, means the status of the facility when the Licensee ceases production or commercial operation temporarily for an undefined period of time;

**“Closure Phase”** means when an Operator ceases operations at a facility without the intent to resume mining activities in the future;

**“Construction Phase”** means any activities undertaken for the purposes of establishing or constructing components, infrastructure, and facilities required for the development of the Mary River Project open-pit mine, as described in the Application;

**“Contact Water”** means surface water or runoff that is physically or chemically affected by the Mary River Project mine development areas and activities;

**“Dams”** means engineered structures including surface water management ponds and embankment dams as described in the document entitled “Baffinland Iron Mines Corporation Mary River Project Attachment 5: Waste Rock Management Plan Appendix 10D-5, dated January 2012.

**“Dam Safety Guidelines”** means the *Canadian Dam Association (CDA) Dam Safety Guidelines (DSG)*, January 1999 or subsequent approved editions;

**“Deleterious Substances”** means a substance as defined in section 34(1) of the *Fisheries Act*;

**“Deposit”** means the placement of waste rock or other solids materials on land or in water;

**“Discharge”** means the release of any water or waste to the receiving environment;

**“Domestic Waste”** means all solid waste generated from the accommodations, kitchen facilities and all other site facilities, excluding any hazardous wastes generated by facilities associated with the Mary River Project;

**“Drainage and Surface Water Management System”** means the network of ditches, drains, and channels, including storm water and ore stockpile runoff system, designed and constructed to collect and manage surface runoff from project site infrastructure and facilities associated with the Project;

**“Effluent”** means the liquid discharge from all site water management facilities;

**“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*;





**“Engineering Geologist”** means a professional geologist registered with the Association of Professional Engineers, Geologist and Geophysicists of Nunavut and whose principal field of specialization is the investigation and interpretation of geological conditions for civil engineering purposes;

**“Engineered Structure”** means any facility, which was designed and approved by a Professional Engineer registered with the Association of Professional Engineers, Geologists and Geophysicists of Nunavut;

**“Environmental Assessment”** means, for the purpose of this licence, the totality of the Nunavut Impact Review Board (NIRB) Public Registry as established under the authority of Article 12 of the NLCA, including all documents associated with the NIRB’s assessment process for Baffinland Iron Mines Corporation Mary River Project;

**“Explosives Facility”** means facilities and equipment designed for the storage of Ammonium Nitrate, detonators, and explosives as well as for the mixing and storage of Ammonium Nitrate Fuel Oil (ANFO) as described in the Plan entitled *“Baffinland Iron Mines: Mary River Project Explosives Management Plan”* January 2012;

**“Final Discharge Point”** in respect of an effluent, means an identifiable discharge point of a mine beyond which the operator of the mine no longer exercises control over the quality of the effluent (Metal Mining Effluent Regulations, SOR/2002-222, 6 June, 2002);

**“Freeboard”** means the vertical distance between the water level and the top of the containment element (i.e. a liner), within a dam or any other channel or pond used for containment of site runoff;

**“Fuel Bladder Farm”** means bulk-fuel storage facility and associated infrastructure initially established at the Milne Port Site, the Mine site and Steensby Port Site under Type “B” Licence 2BB-MRY1114 and which have been transferred to the scope of activities under this Licence;

**“Geotechnical Engineer”** means a professional engineer registered with the Association of Professional Engineers, Geologist and Geophysicists of Nunavut and whose principal field of specialization with the engineering properties of earth materials in dealing with man-made structures and earthworks that will be built on a site. These can include shallow and deep foundations, retaining walls, dams, and embankments;

**“Grab Sample”** means an undiluted quantity of material collected at a particular time and place that may be representative of the total substance being sampled at the time and place it was collected;

**“Greywater”** means the component of effluent produced from domestic use (i.e. washing, bathing, food preparation and laundering), excluding sewage;



**“Ground Water”** means water that occupies pores and fractures in rock and soil below the ground surface in a liquid or frozen state;

**“Hazardous Materials”** means a contaminant which is a dangerous good that is no longer used for its original purpose and is intended for recycling, treatment, disposal or storage;

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

**“ICP Metals Scan”** means, for the purpose of the Licence, elements detected using an inductively coupled plasma (ICP) mass spectrometer. Metal parameters should be consistent with baseline data previously collected and include any other metals of concern or interest;

**“Incinerator System”** means the dual chamber high temperature system, or similar facility, designed for the purposes of combusting acceptable types of Waste generated by the Project as described in the Application including the document entitled *“Waste Management Plan for Construction, Operation and Closure,”* dated April 2013;

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

**“Interim Closure and Reclamation Plan”** means a conceptual detailed plan on the reclamation of mine components which will not be closed until the end of the mining operations, and operational detail for components which are to be progressively reclaimed throughout the mine life;

**“Landfarm Facilities”** means engineered facilities and associated appurtenance designed and constructed for the treatment and storage of hydrocarbon impacted soil and/or water at the Milne Port, the Mine Site and Steensby Port Site as described in the Plan entitled *“Mary River Project Attachment 5: Waste Management Plan for Construction, Operation, and Closure Appendix 10D-4”*, dated April 2013;

**“Landfill Facilities”** means engineered facilities and associated appurtenance designed and constructed for the treatment and storage non-hazardous, inert Waste at the Mine Site and Steensby Port Site as described in the Plan entitled *“Mary River Project Attachment 5: Waste Management Plan for Construction, Operation, and Closure Appendix 10D-4”*, dated April 2013

**“Licence”** means this Type “A” Water Licence, 2AM-MRY1325, issued by the Nunavut Water Board in accordance with the Act, to Baffinland Iron Mines Corporation (BIMC) for the Mary River Project;



**“Licensee”** means the entity to which Licence 2AM-MRY1325 is issued or assigned;

**“Maximum Average Concentration”** means the average concentration of any four consecutively collected samples taken from the identical sampling location and taken during any given timeframe;

**“Maximum Monthly Mean”** means the average concentration of all samples collected over a thirty-day period from the identical sampling location;

**“Metal Leaching”** means the mobilization of metals into solution under neutral, acidic or alkaline conditions;

**“Milne Port Bulk Fuel Storage Facility”** means the permanent fuel storage tanks, containment area and associated appurtenance for the offloading, storing and distribution of fuel at the Milne Port Site as depicted in drawings submitted by the Licensee as described in the Application documents received by the Board on February 17, 2012 ;

**“Milne Port Bulk Sample ore Stockpile”** means the ore stockpile located at Milne Inlet (Milne Port), which is connected with the Bulk Sampling Program carried out during the 2007-2008 period;

**“Milne Port Landfarm Facility”** means the engineered structure or facility and appurtenance designed and constructed at the Milne Port Site for the storage and biological treatment of hydrocarbon impacted soil and water as described in the Plan entitled *“Baffinland Iron Mines Corporation Waste Management Plan for Construction, Operation, and Closure”* dated April 2013;

**“Milne Port Oily Water/Wastewater Treatment Facility”** means the engineered facility and equipment designed and constructed to treat oily water and/or wastewater generated at the Milne Port Site as described in the Plan entitled *“Baffinland Iron Mines Corporation Mary River Project Attachment 5: Freshwater Supply Sewage and Wastewater Management Plan Appendix 10-D-3”* January 2012;

**“Milne Port Potable Water Treatment Facility”** means the packaged media-filtration system and associated equipment designed and installed or constructed to treat water for domestic purposes as indicated in the Application documents including the Plan entitled *“Baffinland Iron Mines Corporation Mary River Project Attachment 5: Freshwater Supply Sewage and Wastewater Management Plan Appendix 10-D-3”* dated January 2012;

**“Milne Port Sewage Treatment Facility”** means the Rotating Biological Contactor (RBC) type treatment Plant, all polishing waste stabilization ponds and other relevant equipment designed and installed to treat Sewage generated by the camp facilities at Milne Inlet as described in the Plan entitled *“Baffinland Iron Mines Corporation Mary River Project Attachment 5: Freshwater Supply Sewage and Wastewater Management Plan Appendix 10-D-3”* dated January 2012;



**“Milne Port Storm Water Drainage Systems”** means the engineered infrastructures and equipment designed and constructed to collect site or surface runoff water from the Milne Port site as depicted in the drawings provided by the Applicant in its Application;

**“Mine Site Bulk Fuel Storage Facility”** means the permanent fuel storage tanks, containment area and associated appurtenance for the offloading, storing, and distribution of fuel at the Mine Site as described in the Application documents received by the Board on February 17, 2012;

**“Mine Site Bulk Sample Ore Stockpile”** means the ore stockpile located at the processing area at the Mary River Site that is associated with the Bulk Sampling Program undertaken in 2007-2008 period;

**“Mine Site Drainage System”** refers to the storm water manage systems designed and constructed to capture surface runoff from Ponds No. 1, 2, and 3, waste rock stockpile, airstrip, and other areas at the Mine site as described in the Application documents received by the Board on February 17, 2012;

**“Mine Site Landfarm Facility”** means the engineered structure or facility and appurtenance designed and constructed at the Mine Site for the storage and biological treatment of hydrocarbon impacted soil and water as described in the Plan entitled *“Baffinland Iron Mines Corporation Waste Management Plan for Construction, Operation, and Closure”* dated April 2013;

**“Mine Site Landfill Facility”** means engineered structure or facility and associated appurtenance designed and constructed at the Mine Site for the storage and treatment of non-hazardous, inert Waste as described in the Plan entitled *“Baffinland Iron Mines Corporation Waste Management Plan for Construction, Operation, and Closure”* dated April 2013;

**“Mine Site Oily Water/Wastewater Treatment Facility”** means the engineered facilities and equipment designed and constructed to treat oily water and/or wastewater generated at the Mine Site as described in the Plan entitled *“Baffinland Iron Mines Corporation Mary River Project Attachment 5: Freshwater Supply Sewage and Wastewater Management Plan Appendix 10-D-3”* January 2012;

**“Mine Site Potable Water Treatment Facilities”** means the packaged media-filtration system and equipment designed and installed or constructed to treat water for domestic purposes at the Mine Site as described in the document entitled *“Baffinland Iron Mines Corporation Mary River Project Attachment 5: Freshwater Supply Sewage and Wastewater Management Plan Appendix 10-D-3”* January 2012;

**“Mine Site Sewage Treatment Facilities”** means the Rotating Biological Contactor type treatment Plants, all polishing waste stabilizations ponds and other relevant equipment designed and installed to treat Sewage generated by the camp facilities at the Mine site as described in the



document entitled “*Baffinland Iron Mines Corporation Mary River Project Attachment 5: Freshwater Supply Sewage and Wastewater Management Plan Appendix 10-D-3*” January 2012;

“**Minister**” means the Minister of Indian and Northern Affairs Canada (AANDC) also referred to as Aboriginal Affairs and Northern Development Canada (AANDC);

“**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;

“**Monitoring Program**” means the program to collect data on surface water and Ground Water quality to assess impacts to the environment of an appurtenant undertaking;

“**Monthly**” means, in the context of monitoring frequency, one sampling event occurring every thirty (30) days with a minimum of twenty one (21) days between sampling events;

“**Non-Contact Water**” means the runoff originating from areas unaffected by mining activity that does not come into contact with developed areas;

“**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;

“**Oily Water/Wastewater Treatment Facility**” means the engineered facilities and equipment designed and constructed to treat oily water and/or wastewater generated at the Relevant Project sites as described in the Plan entitled “*Baffinland Iron Mines Corporation Mary River Project Attachment 5: Freshwater Supply Sewage and Wastewater Management Plan Appendix 10-D-3*” January 2012;

“**Operations Phase**” means the set of activities associated with mining, crushing, screening and transportation of the ore generated by the Mary River Project excluding the construction and decommissioning phases;

“**Operator**” means the person who operates, has control or custody of, or is in charge of a mine or recognized closed mine;

“**Polishing Waste Stabilization Pond (PWSP)**” means the engineered structures designed and constructed for storing and/or carrying out additional treatment of Sewage effluent as described in the Plan entitled “*Baffinland Iron Mines Corporation Mary River Project Attachment 5: Fresh Water Supply, Sewage, and Wastewater Management Plan Appendix 10D*” dated January 2012;

“**Potable Water Supply Facilities**” means the engineered facilities designed and constructed for the treatment and supply of fresh Water for domestic purposes at the Milne Port Site, the Mine Site, Steensby Port Site and the Railway camp as described in the Plan entitled “*Baffinland Iron*”



*Mines Corporation Mary River Project Attachment 5: Freshwater Supply Sewage and Wastewater Management Plan Appendix 10-D-3” January 2012;*

**“Progressive Reclamation”** means actions that can be taken during mining operations before permanent closure, to take advantage of cost and operating efficiencies by using the resources available from mine operations to reduce the overall reclamation costs incurred. It enhances environmental protection and shortens the timeframe for achieving the reclamation objectives and goals;

**“Project”** means the Mary River Project as outlined in the Final Environmental Impact Statement (FEIS) and supplemental information submitted to the Board by Baffin Land Iron Mines Corporation (BIMC) for the Mary River Project. The FEIS included a Water Licence Application and supporting technical documents for an open-pit mine on northern Baffin Island;

**“Quality Assurance/Quality Control (QA/QC)”** Quality Assurance means the system of activities designed to better ensure that quality control is done effectively; Quality Control means the use of established procedures to achieve standards of measurement for the three principle components of quality: precision, accuracy and reliability;

**“Quarry or Quarries”** means the areas of surface excavation for extracting rock material for use as construction materials in the development of infrastructure and facilities for the Project as outlined in the Plan entitled “*Baffinland Iron Mines Corporation Mary River Project Borrow Pit and Quarry Management Plan Appendix 10D-6*”, dated February 2012;

**“Quarterly”** means, in the context of monitoring frequency, one sampling event occurring every three months with a minimum of ninety days between sampling events;

**“Railway”** means the locomotive system, including the approximately 150 km track and other infrastructure, proposed for hauling mostly iron ore from the Mine site to the Steensby Port for shipment to markets abroad.

**“Receiving Environment”** means both the aquatic and terrestrial environments that receive any discharge resulting from the Project;

**“Reclamation”** means the process of returning the mine sites and affected areas to viable and, wherever practicable, self-sustaining ecosystems that are compatible with a healthy environment and with human activities;

**“Recognized Closed Mine”** means a recognized closed mine as defined by section (1) of the *Metal Mining Effluent Regulations* SOR/2002-222 dated 6 June 2002;

**“Regulations”** means the *Nunavut Waters Regulations* sor 2013/669 18th April, 2013;





**“Seepage”** means any water that drains through or escapes from any site structure designed to contain, withhold, divert or retain water or waste. Seepage also includes any flows that have emerged through open pits, runoff from waste rock and ore stockpile areas, quarries, Landfill, Landfarm and other facilities;

**“Sewage”** means all toilet wastes and greywater;

**“Sewage Treatment Facilities”** means the Rotary Biological Contactor (RBC) type sewage treatment plant and infrastructure including the polishing waste stabilization ponds situated at the Milne Port Site, the Mine Site and the Steensby Port Site, as described in the Water Licence Application document entitled *“Baffinland Iron Mines Corporation Mary River Project Attachment 5: Fresh Water Supply, Sewage, and Wastewater Management Plan Appendix 10D-3”*, dated January 2012;

**“Short Term Maximum”** means the maximum concentration of all samples collected over a 24 hour period or less, taken from the identical sampling location;

**“Sludge”** means biosolids or residual solids generated from the treatment of Sewage generated by the Project;

**“Steensby Port Bulk Fuel Storage Facility”** means the permanent fuel storage tanks, containment area and appurtenance designed and constructed for the purpose of offloading, storing and distribution of fuel at the Steensby Port Site as described in the Application documents received by the Board on February 17, 2012;

**“Steensby Port Landfarm Facility”** means the engineered structure or facility and appurtenance designed and constructed at the Steensby Port Site for the storage and biological treatment of hydrocarbon impacted soil and water as described in the Plan entitled *“Baffinland Iron Mines Corporation Waste Management Plan for Construction, Operation, and Closure”* dated April 2013;

**“Steensby Port Landfill Facility”** means the engineered structure or facility and appurtenance designed and constructed at the Steensby Port Site for the storage and treatment of non-hazardous, inert Waste as described in the Plan entitled *“Baffinland Iron Mines Corporation Waste Management Plan for Construction, Operation, and Closure”* dated April 2013;

**“Steensby Port Oily Water/Wastewater Treatment Facility”** means the engineered facilities and associated equipment designed and constructed to treat oily and/or wastewater generated at the Steensby Port Site as described in the Plan entitled *“Baffinland Iron Mines Corporation Mary River Project Attachment 5: Freshwater Supply Sewage and Wastewater Management Plan Appendix 10-D-3”* January 2012;

**“Steensby Port Potable Water Treatment Facility”** means the packaged media-filtration system and associated equipment designed and installed or constructed to treat water for



domestic purposes as described in the Plan entitled *“Baffinland Iron Mines Corporation Mary River Project Attachment 5: Freshwater Supply Sewage and Wastewater Management Plan Appendix 10-D-3”* January 2012;

**“Steensby Port Sewage Treatment Facility”** means the Rotating Biological Contactor type treatment Plant, all polishing waste stabilizations ponds and other relevant equipment designed and installed to treat Sewage generated by the camp facilities at Steensby Port as described in the Plan entitled *“Baffinland Iron Mines Corporation Mary River Project Attachment 5: Freshwater Supply Sewage and Wastewater Management Plan Appendix 10-D-3”* January 2012;

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

**“Traditional Knowledge”** means the practical knowledge that has been gathered through the experience of living in close contact with nature and has been passed along or communicated orally, and handed down from generation to generation;

**“Use”** means use as defined in section 4 of the Act;

**“Waste”** means waste as defined in section 4 of the Act;

**“Waste Management Facilities”** means all facilities designated for the disposal of waste including: temporary and permanent storage and sorting areas, Sewage Treatment Plant, Landfills, Landfarms, waste rock, collection ponds and others as described in the Plan entitled *“Mary River Project Attachment 5: “Waste Management Plan for Construction, Operation, and Closure Appendix 10D-4”, dated April 2013;*

**“Waste Rock”** means all unprocessed rock materials that are or were produced as a result of mining operations and have no current economic value;

**“Waste Water”** means the water generated by site activities or originates on-site that requires treatment or any other water management activity;

**“Water”** means water as defined in section 4 of the Act;

**“Water Crossings”** means engineered structures, such as bridges, causeway, etc, designed and constructed for the purposes of traversing water ways without significantly impeding the flow of Water as described in the Application documents received February 17, 2012;

**“Weekly”** means, in the context of monitoring frequency, one sampling event occurring every 7 days with a minimum of 5 days between sampling events.





## **Schedule B. General Conditions**

The Annual Report referred to in Part B, Item 4 shall include:

1. 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. WATER**

- i. the monthly and annual volumes, in cubic metres, of all fresh Water withdrawn for domestic and industrial purposes from each source in, on, or flowing through Inuit-owned land in accordance with Part E, Items 3 and 4 of the Licence;
- ii. the monthly and annual volumes, in cubic metres, of all freshwater obtained for domestic and industrial purposes from each source in, on, or flowing through Crown Lands in accordance with Part E, Items 3 and 4 of the Licence;
- iii. the combined monthly and annual volumes in cubic metres of all fresh Water withdrawn for domestic and industrial purposes from sources in, on, or flowing through both Inuit-Owned Land and Crown Lands;
- iv. the monthly and annual volumes of reclaimed or recycled Water used and the purposes for which it is used;

### **b. WASTE**

- i. the monthly and annual volume in cubic meters of treated Sewage effluent discharged from each Sewage Treatment Facility including each Polishing Waste Stabilization Pond;
- ii. the monthly and annual volume in cubic meters of treated wastewater discharged from each Oily Water/Wastewater Treatment Facility;
- iii. monthly and annual quantities of all Effluent discharged from each Surface Water Management (SWM) Pond;
- iv. the monthly and annual volumes in cubic metres of Sludge removed from each Sewage Treatment Facility and disposed of at each Landfill Facility or any approved alternative disposal facility;
- v. the monthly and annual volume in cubic metres of hazardous waste generated and transported from the Project sites to Licensed facility outside of Nunavut for treatment;
- vi. the monthly and annual volume in cubic metres of any wastes backhauled to communities in Nunavut for treatment;
- vii. the monthly and annual volume in cubic metres of waste deposited at each Landfill Facility;
- viii. monthly and annual volume in cubic metres of hydrocarbon impacted soil and water deposited at each Landfarm Facility;



- ix. the monthly and annual volume in cubic metres of Sewage transported for treatment from the Railway camps to the Mine Site and Steensby Port Site Sewage Treatment Facilities;
- x. the monthly and annual quantities of waste rock generated and used or disposed of;
- xi. summary of quantities and analysis of seepage and runoff monitoring from the Landfill Facilities, Landfarm facilities, and any other relevant facilities including ponds embankment dam;
- xii. a summary report of solid waste disposal activities including monthly and annual quantities in cubic metres of waste generated and location of disposal;

**c. SPILLS**

- i. a list and description of all unauthorized discharges, including volumes and spill report line identification number and summaries of follow-up action taken;
- ii. a list of unauthorized discharges and a summary of follow-up action(s) taken;
- iii. a summary of any updates or revisions to the Spill Contingency Plan;

**d. MODIFICATIONS**

- i. a summary of modifications and/or major maintenance work carried out on all water and waste related structures and facilities;

**e. MONITORING**

- i. the results of monitoring under the AEMP framework and other monitoring requirements;
- ii. results of thermal monitoring and/or research carried out in conjunction with the Waste Rock Management Plan and disposal of potentially acid generating and metal leaching materials, permafrost integrity along the railway alignment and other project sites;
- iii. tabular summaries of the results and interpretation of all data generated under the Monitoring Program in Part I and Schedule I

**f. CLOSURE**

- i. a summary of any progressive closure and reclamation work undertaken including photographic records of site conditions before and after completion of operations, and an outline of any work anticipated for the next year, including any changes to implementation and scheduling;
- ii. an updated estimate of the current restoration liability required under part C, Item, 1b, based upon the results of progressive restoration, restoration research, project development monitoring, and any changes or modifications to the project;



**g. PLANS/ REPORTS/ STUDIES**

- i. a summary of any studies requested by the Board that relate to Waste disposal, Water use or Reclamation, and a brief description of any future studies planned
- ii. where applicable, revisions provided as Addendums with an indication of where changes have been made for Plans, Reports, and Manuals.
- iii. an executive summary in English, Inuktitut and French of all plans, reports, or studies conducted under this Licence;
- iv. a summary, including photographic records before, during and after construction activities, of any modifications and/or major maintenance work carried out on facilities and Infrastructure designed to contain, withhold, divert or retain Water or Wastes, and an outline of any work anticipated for the next year;
- v. a summary of the results of any geochemical analyses conducted on materials used to construct facilities and infrastructure under Part D, Item 13;
- vi. a detailed discussion on the performance, installation, and evaluation, including the use of photographic records, of the primary and secondary containment structure used in fuel storage to safeguard impacts to freshwaters;
- vii. the results of chemical analyses conducted on residue generated from each incinerator system prior to disposing of in any landfill;
- viii. a brief description of follow-up action(s) taken to address concerns presented within any inspection and compliance reports prepared by the Inspector;
- ix. an update, where required under Part B, Item, 18, in the form of an addendum or revision to the Plans approved under the relevant sections of this Licence;
- x. monthly and annual quantities of aggregates excavated and used from Quarries and Borrow Pits associated with the Licence;
- xi. the results of any further acid/base accounting conducted on potential acid generating and non-potential acid generated waste rock(PAG and NPAG);
- xii. a summary of any specific studies or reports requested by the Board, and a brief description of any future studies planned or proposed;
- xiii. all monitoring data with respect to geochemical analyses conducted on material used to construct roads, quarries, and other infrastructure;

**h. GENERAL**

- i. a summary of actions taken to address concerns or deficiencies listed in the inspection reports and/or compliance reports filed by an Inspector.
- ii. a summary of public consultation and participation with local organizations and the residents of the nearby communities, including a schedule of upcoming community events and information sessions;
- iii. monthly and annual volume of iron ore generated by the project; and

**i. OTHER**

- i. any other details on Water use or Waste Disposal requested by the Board by November 1<sup>st</sup> of the year being reported.



### **Schedule C. Conditions Applying to Security**

The Annual Security Review (ASR) referred to in Part C shall be conducted as follows:

#### **TIMING, EVIDENCE AND PROCESS FOR ASR**

1. Unless otherwise directed by the Board, the ASR shall be conducted annually on the first Thursday of December, in the form of a teleconference meeting, with representatives from the Licensee, the Minister, the Qikiqtani Inuit Association and the Nunavut Water Board. The ASR may be conducted in the form of an in person meeting if the Board considers it necessary, or if the Board grants the special request of the Licensee, the Minister or the Qikiqtani Inuit Association, for an in person meeting.
2. Unless otherwise directed by the Board, on the first Thursday of November, the Licensee, the Minister and/or the Qikiqtani Inuit Association shall file with the Board any information they intend to rely upon for the ASR, including but not limited to:
  - a. an updated Preliminary, Interim or Final Mine Closure and Reclamation Plan;
  - b. the total financial security amount calculated for the highest level of reclamation liability for land and water combined for the upcoming year as calculated in accordance with Item 1 of this Schedule;
  - c. the total of any equivalent financial security being held by the Minister and/or the Qikiqtani Inuit Association outside the Licence;
  - d. information that supports the increase, maintenance or reduction of the total financial security under the Licence; and
  - e. any other information necessary to support the request of the parties for the Board to issue further directions under Part C with respect to the amount of security to be furnished and maintained under the Licence.
3. Unless otherwise directed by the Board, within 45 days following the ASR, the Board will advise the Licensee, the Minister and the Qikiqtani Inuit Association of the total financial security for the upcoming year to be filed as required under Part C, Item 1 of the Licence.
4. Unless otherwise directed by the Board, within thirty (30) days from the date the Board releases its determination of the total financial security amount required for the upcoming year, as set out in Item 3 above, the Licensee is required to furnish and maintain security with the Minister in the amount and form that is satisfactory to the Minister or that is in accordance with the applicable regulations.
5. In any event, if the Licensee fails to file the total financial security amount required for the upcoming year as determined by the Board under the Licence on or before March 1, the Licensee is not authorized to proceed with any planned activities that could increase the



total financial security amount required to be held under the Licence until they have filed the total financial security amount required to be held under Part C for the upcoming year.

### **TOTAL FINANCIAL SECURITY CALCULATION**

1. The basis for calculating the total financial security required for final reclamation under the ASR is as follows:
  - a. the total financial security amount must be calculated on the basis of a holistic approach to reclamation that includes outstanding reclamation liability for land and water combined;
  - b. the total financial security amount must include consideration of cumulative and legacy liabilities; and
  - c. the total financial security amount must be calculated at the beginning of the work year and must be sufficient to meet the highest reclamation liability in the upcoming year.

### **EVIDENCE TO REDUCE TOTAL FINANCIAL SECURITY UNDER THE LICENCE**

1. Upon receiving written evidence from the Licensee, the Minister and/or the Qikiqtani Inuit Association that adequate security, equivalent to that held under Part C of the Licence is secured by another mechanism acceptable to the Licensee, the Minister and the Qikiqtani Inuit Association, including, but not limited to the parties entering into a security management agreement or similar instrument, the Board may reduce the total financial security amount required to be held under the Licence.
2. In assessing the extent of any reduction to the total financial security amount held under the Licence as set out in Item 1 of this Schedule, the Board must ensure that when taken together, the equivalent security and the total financial security amount held under Part C of the Licence are sufficient to meet the total financial security amount for reclamation as calculated under Item 1 of this Schedule.
3. Further, in assessing the extent of any reduction to the total financial security amount held under the Licence, the Board may consider a split between the portion of financial security required for reclamation on Inuit Owned Lands and the portion of financial security required for reclamation on Crown lands and may direct that the reductions in the total financial security amount be discounted from the financial security amount applicable to only Inuit Owned Lands or Crown lands as may be appropriate.



### **Schedule D. Conditions Applying to Construction**

1. The Construction Monitoring Report referred to in Part D, Item 17 shall include:
  - a. description of all infrastructure and facilities designed and constructed to contain, withhold, divert or retain Water and/or Waste;
  - b. a summary of construction activities including photographic records before, during and after construction of the facilities and infrastructure designed to contain, withhold, divert or retain Water and/or Waste;
  - c. as-built drawings and design for facilities and infrastructure, in Item 1(a) of this schedule, designed and constructed to contain, withhold, divert or retain Water and/or Waste;
  - d. documentation of field decisions that deviate from the original plans and any data used to support or developed facilities and infrastructure to withhold, divert or retain Water and/or Waste;
  - e. a comparison of measured versus predicted performance of infrastructure and facilities;
  - f. any blast vibration monitoring and control for quarrying activity carried out in close proximity to fish bearing waters;
  - g. monitoring conducted for sediment and explosives residue release from construction areas;
  - h. monitoring undertaken in accordance with Part D of the during the Construction Phase of the Project;
  - i. details confirming that the requirements of the CCME guidance document entitled “Aboveground Storage Tank Systems for Petroleum and Allied Petroleum Products (2003)” have been met by the Licensee;
  - j. data collected from instrumentation used to monitor earthworks and the interpretation of that data;
  - k. a discussion of any unanticipated observations including changes in risk and mitigation measures implemented to reduce risk during construction;
  - l. an overview of any method including frequency used to monitor deformations, seepage and geothermal responses;



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- m. a summary of maintenance work undertaken as a result of settlement or deformation of dikes and dams;
- n. a summary of adaptive management principles and practices applied during the relevant phases of the Project and their overall effectiveness;



**Schedule E. Conditions Applying to Water Use and Management**

There is no Schedule for PART E – Conditions Applying to Water Use and Management

**Schedule F. Conditions Applying to Waste Disposal and Management**

There is no Schedule for PART F – Conditions Applying to Waste Disposal and Management

**Schedule G. Conditions Applying to Modifications**

There is no Schedule for PART G – Conditions Applying to Modifications

**Schedule H. Conditions Applying to Emergency Response and Contingency Planning**

There is no Schedule for PART H – Conditions Applying to Emergency Response and Contingency Planning





## Schedule I. Conditions Applying to General and Aquatics Effects Monitoring

Table 12: Monitoring Group Parameters

| Group | Parameters                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1     | Water withdrawal volume in cubic metres, or<br>Water Discharge volume in cubic metres                                                                                                                                                                                                                                                                                                                                                              |
| 2     | Biological Oxygen Demand (BOD <sub>5</sub> ), pH, Total Suspended Solids (TSS), Faecal Coliform, Oil and Grease,<br>ammonia-Nitrogen, Total kjeldahl Nitrogen(TKN), total phosphorous,                                                                                                                                                                                                                                                             |
| 3     | a. Acute lethality to Rainbow Trout, <i>Oncorhynchus mykiss</i> (as per Environment Canada's Environmental Protection Series Biological Test Method EPS/1/RM/13); and<br>b. Acute lethality to <i>Daphnia magna</i> (as per Environment Canada's Environmental Protection Series Biological Test Method EPS/1/RM/14).                                                                                                                              |
| 4     | pH, Total Suspended Solids (TSS), Ammonia, Total Phosphorous<br>Benzene, Ethylbenzene, Toluene,<br>Oil and Grease,<br><b>total metals:</b> Arsenic, Copper, Lead, Nickel, Zinc                                                                                                                                                                                                                                                                     |
| 5     | pH, Total Suspended Solids (TSS)<br>Benzene, Ethylbenzene, Toluene,<br>Total Lead,<br>Oil and Grease,<br>Total Petroleum Hydrocarbons (TPH),                                                                                                                                                                                                                                                                                                       |
| 6     | pH, Alkalinity, Conductivity, Total Suspended Solids (TSS), Total Dissolved Solids (TDS)<br>Oil and Grease, Phenols<br>total petroleum hydrocarbons<br>Total Organic Carbon (TOC), Dissolved Organic Carbon (DOC)<br>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<br>Trace Arsenic and Mercury |
| 7     | pH, total suspended solids, total dissolved solids, alkalinity, hardness, turbidity, total Kjeldahl nitrogen, ammonia nitrogen, nitrate nitrogen, dissolved organic carbon, total organic carbon, total phosphorus, sulphate, fluoride, chloride. <b>total and dissolved metals:</b> Aluminum,                                                                                                                                                     |



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|   |                                                                                                                                                                                                                                       |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | arsenic, cadmium, calcium, copper, iron, lead, magnesium, manganese, mercury, molybdenum, nickel, potassium, selenium, sodium, thallium, uranium, zinc,<br><b>field parameters:</b> pH, temperature, turbidity, specific conductance. |
| 8 | Ammonia (total NH <sub>3</sub> -N), Nitrate (total NO <sub>3</sub> -N), pH, Conductivity<br>Total Suspended Solids, Oil and Grease                                                                                                    |

Table 13: Monitoring Program: Milne Port Site

| Station                | Description                                                                                         | Project Phases                        | Monitoring Parameters | Frequency                                         |
|------------------------|-----------------------------------------------------------------------------------------------------|---------------------------------------|-----------------------|---------------------------------------------------|
| <b>Milne Port Site</b> |                                                                                                     |                                       |                       |                                                   |
| MP-MRY-2               | Freshwater Intake at Phillips Creek (Summer)                                                        | Construction<br>Operations<br>Closure | Group 1               | Record Daily<br>Report Monthly                    |
| MP-MRY-3               | Freshwater Intake from Km 32 Lake (Winter)                                                          | Construction<br>Operations<br>Closure | Group 1               | Record Daily<br>Report Monthly                    |
| MP-01                  | Milne Port Sewage Treatment Facilities<br>(discharge into ditch prior to ocean)                     | Construction<br>Operations            | Groups 1, 2           | Monthly                                           |
|                        |                                                                                                     |                                       | Group 3               | Annually                                          |
| MP-01a                 | Milne Port Polishing Waste Stabilization Pond (PWSP)                                                | Construction<br>Operations            | Groups 1, 2           | Once prior to discharge and<br>Monthly thereafter |
|                        |                                                                                                     |                                       | Group 3               | Annually                                          |
| MP-02                  | Milne Port Maintenance Shop<br>Oily water/WWTF                                                      | Construction<br>Operations            | Groups 1 and 4        | Monthly                                           |
| MP-MRY-04              | Milne Exploration Phase<br>Sewage Treatment Facilities (to become inactive after transition period) | Construction<br>Operations<br>Closure | Groups 1, 2           | Monthly                                           |
|                        |                                                                                                     |                                       | Group 3               | Annually                                          |
| MP-MRY-04a             | Milne Exploration Phase<br>Sewage PWSP (to become inactive after transition period)                 | Construction<br>Operations<br>Closure | Groups 1, 2           | Once prior to discharge and<br>Monthly thereafter |
|                        |                                                                                                     |                                       | Group 3               | Annually                                          |
| MP-03                  | Milne Port Bulk Fuel Storage<br>Facility Stormwater                                                 | Construction<br>Operations            | Groups 1 and 4 5      | Daily Flow<br>Monthly                             |



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|           |                                                                                                                         |                                       |                             |                                                                                                       |
|-----------|-------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-----------------------------|-------------------------------------------------------------------------------------------------------|
| MP-04     | Milne Port Landfarm Facility<br>Storm water                                                                             | Construction<br>Operations<br>Closure | Group 1<br>Group 5 Plus TSS | Daily Flow<br>Monthly                                                                                 |
| MP-MRY-7  | Milne Exploration Phase<br>Bladder Fuel Storage Facility<br>Storm water (to become<br>inactive after transition period) | Construction<br>Operations<br>Closure | Groups 1<br>and 5           | Daily Flow<br>Monthly                                                                                 |
| MP-MRY-12 | Bulk Sample Stockpile Area<br>Seepage                                                                                   | Construction<br>Operations<br>Closure | Groups 1 and 7              | Monthly                                                                                               |
|           |                                                                                                                         |                                       | Group 3                     | Annually                                                                                              |
| MP-C-A    | Surface discharge downstream<br>of construction area at Milne<br>Port                                                   | Construction                          | Groups 1 and 8              | during periods of<br>flow and following<br>significant<br>precipitation events,<br>on a monthly basis |
| MP-C-B    |                                                                                                                         |                                       |                             |                                                                                                       |
| MP-C-C    |                                                                                                                         |                                       |                             |                                                                                                       |
| MP-C-D    |                                                                                                                         |                                       |                             |                                                                                                       |
| MP-C-E    |                                                                                                                         |                                       |                             |                                                                                                       |
| MP-C-F    |                                                                                                                         |                                       |                             |                                                                                                       |
| MP-C-G    |                                                                                                                         |                                       |                             |                                                                                                       |
| MP-C-H    |                                                                                                                         |                                       |                             |                                                                                                       |

Table 14: Monitoring Program : Mary River Mine Site

| Station                     | Description                                                       | Phases                                | Monitoring<br>Parameters | Frequency                                            |
|-----------------------------|-------------------------------------------------------------------|---------------------------------------|--------------------------|------------------------------------------------------|
| <b>Mary River Mine Site</b> |                                                                   |                                       |                          |                                                      |
| MS-MRY-1                    | Freshwater Intake from<br>Camp Lake                               | Construction<br>Operations<br>Closure | Group 1                  | Record Daily                                         |
| MS-01                       | Mine Site Sewage Treatment<br>Facilities                          | Construction<br>Operations            | Groups 1, 2,             | Monthly                                              |
|                             |                                                                   |                                       | Group 3                  | Annually                                             |
| MS-01a                      | Mine Site Polishing/Waste<br>Stabilization Pond (PWSP)            | Construction<br>Operations            | Groups 1, 2              | Once prior to<br>discharge and<br>Monthly thereafter |
|                             |                                                                   |                                       | Group 3                  | Annually                                             |
| MS-02                       | Mine Site Maintenance Shop<br>Oily Water WWTF                     | Construction<br>Operations            | Groups 1 and 4           | Monthly                                              |
| MS-MRY-04                   | Exploration Camp Sewage<br>Treatment Facility                     | Construction<br>Operations<br>Closure | Groups 1, 2,             | Monthly                                              |
|                             |                                                                   |                                       | Group 3                  | Annually                                             |
| MS-MRY-04a                  | Exploration Camp Polishing<br>Waste Stabilization Ponds<br>(PWSP) | Construction<br>Operations            | Groups 1, 2,             | Once prior to<br>discharge and<br>Monthly thereafter |
|                             |                                                                   |                                       | Group 3                  | Annually                                             |



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|                         |                                                                                                           |                                 |                  |                                      |
|-------------------------|-----------------------------------------------------------------------------------------------------------|---------------------------------|------------------|--------------------------------------|
| MS-03                   | Mine Site Bulk Fuel Storage Facility Stormwater                                                           | Construction Operations         | Group 1          | Daily Flow                           |
|                         |                                                                                                           |                                 | Group 5          | Monthly                              |
| MS-04                   | Mine Site Fuel Unloading Station Stormwater                                                               | Construction Operations         | Groups 1         | Daily Flow                           |
|                         |                                                                                                           |                                 | and 5            | Monthly                              |
| MS-05                   | Mine Site Landfarm Facility Stormwater                                                                    | Construction Operations         | Group 1          | Daily Flow                           |
|                         |                                                                                                           |                                 | Group 5 Plus TSS | Monthly                              |
| MS-MRY-6                | Exploration Camp Bulk Fuel Storage Facility (Bladder Farm) Stormwater                                     | Construction Operations         | Group 1          | Daily Flow                           |
|                         |                                                                                                           |                                 | Group 5          | Monthly                              |
| MS-06+                  | Ore Stockpile Pond Stormwater                                                                             | Operations Closure              | Groups 1 and 7   | Monthly during summer                |
|                         |                                                                                                           |                                 | Group 3          | Annually                             |
| MS-07                   | Run of Mine Ore Stockpile Pond Stormwater                                                                 | Operations Closure              | Groups 1 and 7   | Monthly during summer                |
|                         |                                                                                                           |                                 | Group 3          | Annually                             |
| MS-08                   | Waste Rock Stockpile West pond                                                                            | Operations Closure              | Groups 1 and 7   | Monthly during summer                |
|                         |                                                                                                           |                                 | Group 3          | Annually                             |
| MS-09                   | Waste Rock Stockpile East pond                                                                            | Operations Closure              | Groups 1 and 7   | Monthly during summer                |
|                         |                                                                                                           |                                 | Group 3          | Annually                             |
| MS-MRY-09               | Bulk Sample Open Pit – Surface water drainage (to become inactive in future)                              | Construction Operations         | Groups 1 and 7   | Monthly (during summer)              |
|                         |                                                                                                           |                                 | Group 3          | Annually                             |
| MS-MRY-10               | Bulk Sample Weathered Ore Stockpile – Downstream surface water drainage (to become inactive in future)    | Construction Operations Closure | Groups 1 and 7   | Monthly during summer                |
|                         |                                                                                                           |                                 | Group 3          | Annually                             |
| MS-MRY-11               | Bulk Sample Processing Stockpile Area – Downstream surface water discharge (to become inactive in future) | Construction Operations Closure | Groups 1 and 7   | -Monthly during summer               |
|                         |                                                                                                           |                                 | Group 3          | Annually                             |
| MS-MRY-13a & MS-MRY-13b | Non-Hazardous Waste Landfill – Downstream surface water drainage                                          | Construction Operations Closure | Groups 1, and 6  | Daily<br>Monthly                     |
| MS-C-A                  | Surface discharge downstream                                                                              |                                 | Groups 1 and 8   | during periods of flow and following |
| MS-C-B                  |                                                                                                           |                                 |                  |                                      |



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|        |                                   |              |  |                                                      |
|--------|-----------------------------------|--------------|--|------------------------------------------------------|
| MS-C-C | of construction area at Mine Site | Construction |  | significant precipitation events, on a monthly basis |
| MS-C-D |                                   |              |  |                                                      |
| MS-C-E |                                   |              |  |                                                      |
| MS-C-F |                                   |              |  |                                                      |

Table 15: Monitoring Program : Steensby Port Site

| Station              | Description                                        | Phases                                 | Monitoring Parameters         | Frequency                                      |
|----------------------|----------------------------------------------------|----------------------------------------|-------------------------------|------------------------------------------------|
| <b>Steensby Port</b> |                                                    |                                        |                               |                                                |
| SP-08                | Freshwater Intake at ST 347 Lake (permanent camp)  | Construction<br>Operations<br>Closures | Group 1                       | Record Daily<br>Report Monthly                 |
| SP-09                | Freshwater Intake at 3 Km lake                     | Construction<br>Operations<br>Closure  | Group 1                       | Record Daily<br>Report Monthly                 |
| SP-01                | Steensby Port Sewage Treatment Facilities          | Construction<br>Operations             | Groups 1, 2                   | Monthly                                        |
|                      |                                                    |                                        | Group 3                       | Annually                                       |
| SP-01a               | Steensby Polishing/Waste Stabilization Pond (PWSP) | Construction<br>Operations             | Groups 1, 2                   | Once prior to discharge and Monthly thereafter |
|                      |                                                    |                                        | Group 3                       | Annually                                       |
| SP-02                | Steensby Maintenance Shop Oily Water WWTF          | Construction<br>Operations             | Groups 1 and 4                | Monthly                                        |
| SP-03                | Floating Construction Camp Sewage WWTF             | Construction                           | Groups 1, 2, and 3            |                                                |
| SP-04                | Steensby Bulk Fuel Storage Facility Stormwater     | Construction<br>Operations             | Groups 1 and 5                | Daily Flow<br>Monthly                          |
| SP-05                | Steensby Marine Fuel Storage Facility Stormwater   | Construction<br>Operations             | Groups 1 and 5                | Daily Flow<br>Monthly                          |
| SP-06                | Steensby Landfarm Facility Stormwater              | Operations                             | Group 1<br>Group 5 Plus TSS   | Daily<br>Monthly                               |
| SP-07                | Steensby Ore Stockpile Stormwater                  | Operations                             | Groups 1 and 7<br><br>Group 3 | -Monthly during summer<br>-Annually            |
| SP-08                | Steensby Landfill Seepage                          | Construction<br>Operations<br>Closure  | Groups 1, and 6               | Monthly/observed flow                          |



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| Rail Camps                |                                                                        |              |         |                                |
|---------------------------|------------------------------------------------------------------------|--------------|---------|--------------------------------|
| TBD<br>Ravn River<br>Camp | Fresh Water Intake<br>Ravn Camp Lake                                   | Construction | Group 1 | Record Daily<br>Report Monthly |
| TBD<br>Mid-Rail<br>Camp   | Freshwater Intake at<br>Nivek Lake (summer)<br>Ravn Camp Lake (winter) | Construction | Group 1 | Record Daily<br>Report Monthly |
| TBD<br>Cockburn<br>North  | Freshwater Intake at<br>Cockburn Lake                                  | Construction | Group 1 | Record Daily<br>Report Monthly |
| TBD<br>Cockburn<br>South  | Freshwater Intake at<br>Cockburn Lake                                  | Construction | Group 1 | Record Daily<br>Report Monthly |



### **Schedule J. Conditions Applying to Abandonment, Reclamation and Closure**

The annual work plan and updated estimate of anticipated mine closure and reclamation process referred to in Part J shall be conducted as follows:

1. Unless otherwise directed by the Board, on an annual basis on or before November 1, the Licensee shall submit to the Board an annual work plan and updated estimate of the anticipated mine closure and reclamation costs for the upcoming year.
2. The anticipated mine closure and reclamation costs will include the highest reclamation liability in the upcoming year and the liability will be assessed separately for:
  - a. the proportion of the Project activities taking place on Inuit Owned Lands; and
  - b. the proportion of the Project activities taking place on Crown lands.
3. As part of the Annual Security Review conducted under Schedule C, the Licensee, the Minister and the Qikiqtani Inuit Association will review and provide comment to the Board on the annual work plan and updated estimate of the anticipated mine closure and reclamation costs for the upcoming year.
4. If the parties are unable to reach agreement regarding the updated estimate of the anticipated mine closure and reclamation costs for the upcoming year, the Board, as part of the Annual Security Review determination under Schedule C, shall provide direction regarding the acceptable estimate of anticipate mine closure and reclamation costs for the upcoming year.