



November 26, 2015

Phyllis Beaulieu, Manager of Licensing
Nunavut Water Board
P.O. Box 119, Gjoa Haven NU X0B 1J0

Dear Ms. Beaulieu:

Re: Baffinland Iron Mines Corporation (Baffinland) - Submission September 2015 Biannual Geotechnical Inspection Report No. 2 - Water Licence Type 'A' No. 2AM-MRY1325

1. INTRODUCTION

Under Part D, Item 18, of Baffinland Iron Mines Corporation (BIMC) Type "A" Water Licence 2AM-MRY1325, Amendment No. 1, there is a requirement to conduct biannual geotechnical inspections of specified Mary River Project (the 'Project') infrastructure. Part D, Item 19, of the Type 'A' Licence states that:

"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."

During 2015, the biannual geotechnical field inspections were conducted by Barry Martin of Barry H. Martin Consulting Engineer and Architect (BMCE) of Timmins, Ontario. The focus of the inspections was on Water Licence related infrastructure located at the main camp sites, known as the Mary River Mine Site and Milne Port Site Camps. Mr. Barry Martin has been conducting annual geotechnical inspections for the Project since 2008. The first report covering the first inspection (July 30 to August 4) was submitted in early October. The second inspection was completed September 24 to 29, and the report for that inspection is attached, herewith.

During the September 2015 inspection, the following site facilities were inspected:

Mary River Mine Site

- Bulk Fuel Storage Containment (Historical Bladder Farm)
- Generator Fuel Storage Facility Containment
- Polishing/Waste Stabilization Pond No. 1
- Polishing/Waste Stabilization Ponds Nos. 2 and 3 (constructed as a two-cell structure)
- Helicopter Fuel Cell Containment
- Barrel Fuel Containment (constructed as a two-cell structure)(MS-HWB-3 and MS-HWB-4)
- Hazardous Waste Storage (MS-HWB-2)
- Enviro-Tank Storage (constructed contiguous with hazardous waste storage and stove oil storage)
- Stove Oil Storage (MS-HWB-5)
- Jet Fuel Tank and Pump Containment

- Solid Waste Disposal Site
- Mine Site Steel Fuel Tank Farm Containment
- QMR2 Quarry
- Crusher Pad Drainage Containment
- Waste Pile Drainage Containment
- Jet "A" Aircraft Containment
- Hazardous Waste Containment

Milne Inlet Site

- Existing Polishing/Waste Stabilization Pond
- Barrel Fuel Storage (constructed as a two-cell structure)
- Hazardous Waste Storage (constructed as a two-cell structure) (MP-HWB-3, MP-HWB-4, and MP-HWB-5)
- Fuel Tank Farm
- New Sewage Effluent Pond
- Land Farm
- Contaminated Snow Containment
- Ore Stockpile Sediment Ponds East and West
- Q1 Quarry

The attached report presents the findings of the September inspection and recommendations for the aforementioned structures. Sections 2.0 and 3.0 of this letter summarize Baffinland's plan for implementing recommendations. Where this is no mention of particular infrastructure, there were no concerns identified by BMCE for same.

2. MARY RIVER MINE CAMP RECOMMENDATIONS

- **Barrel Fuel Containment (Now MS-HWB-3 and MS-HWB-4)**

During the July/August inspection, the north dyke in the north cell has had a track fork lift travel over the berm at the east end. Shortly after this observation was brought to light, the issue was resolved by means of warnings and trainings by supervisors to their personnel. During the September geotechnical inspection there was no evidence of this practice reoccurring.

Baffinland Action: All berms are currently being inspected on a bi-weekly inspection schedule by the Environment Department to ensure that this remains so. Consideration is being given to erecting signage at the berms.

- **Enviro Tank Storage (Now MS-HWB-1)**

The integrity of the cell liner is questionable.

Baffinland Action: The cell is currently not being used and has been left empty. The Site Services Department supervisors were made aware that this area shall no longer be used for the storage of hazardous waste or substances until it has been repaired.

- **Solid Waste Disposal Site**

The current footprint as established by the existing covered material and the "blow control" fence at the front of the immediate site is filling up and there is a requirement to expand the landfill footprint in accordance with plans and guidelines set out for this solid waste disposal site.

Baffinland Action: Plans are in place to extend the landfill berms and blow fence. These actions will be implemented by the end of December 2015. Biweekly inspections of the landfill are ongoing by the Environment Department.

- **Mine Site Steel Fuel Tank Farm Containment**

All work was observed to be complete excepting the installation of the sump pits that are on site awaiting installation and which shall be utilized to facilitate the removal of water that collects from precipitation. The recommendation remains the same as in the first inspection: it was recommended that at least one sump be installed as per the drawings prepared for this facility

Baffinland Action: A sump will be installed during the open water season of 2016, as soon as conditions allow and required resources are available.

- **QMR2 Quarry**

It was observed that there was some instability with some undermining of surface on an upper bench.

Baffinland Action: The quarry is still active. The unstable area noted in the inspection is an active mining face (in the process of being mined) as the quarry expands. Once the area is mined, the slopes will be made stable in accordance with the approved QMR2 Quarry Management Plan and the Interim Closure and Reclamation Plan. These plans include requirements for long term stability at the time of closure.

- **Crusher Pad Drainage Containment**

Minor tears and perforations were observed in the liner near the crests of the berms. There may be a requirement for additional riprap along the sides of the facility.

Baffinland Action: Rip rap will be placed as required prior to the 2016 Freshet. The minor tears and punctures to the liner will be repaired during next spring when the liner contractor will next be at site. In the meantime the liner and structures appear stable.

3. MILNE PORT CAMP RECOMMENDATIONS

- **Fuel Tank Farm**

The recommendation remains the same as in the first inspection: it was recommended that at least one additional sump be installed as per the drawings prepared for this facility.



Baffinland Action: When conditions permit and resources available a second sump will be installed at the low point at the north end of the facility.

- **Landfarm**

It was observed that the landfarm containment was complete with the exception of some soil cover in the area of the sump. It was recommended that the remaining dyke structure without protective cover over it be covered as per the design drawings although it was also noted that this was not an absolute requirement.

Baffinland Action: This is duly noted and consideration will be given to covering the liner during the 2016 open water season.

- **Ore Stockpile Sediment Ponds East and West**

The inspection indicated concerns over the stability of the liner and recommended more soil ballast on the south edge / tire ballast over the liner which appears subject to minor wind damage.

Baffinland Action: Used tires will be placed as ballast on north side of the facility where there is exposed liner. This will be completed by December 6, 2015.

- **Loading Area Contaminated Storage (Now MP-HWB-1)**

During the previous inspection in July/August, travel over the berm that had been a concern, however, there was no evidence of this practice at the time of the September inspection.

Baffinland Action: This concern has been addressed by means of employee awareness and erected temporary barriers. Monitoring by the Environment Department is ongoing. Consideration is being given to erecting signage at the berms.

We trust that this submittal satisfies the requirements the geotechnical requirements as outlined in our Water Licence. Should you have any questions, please do not hesitate to contact Jim Millard, Environmental Manager, at 1.416-364.8820 ext 6016 or 1.902.403.1337 or by e-mail at jim.millard@baffinland.com.

Best Regards,

James Millard, M.Sc., P.Geo.
Environmental Manager

Attach: Annual Geotechnical Inspections, Mary River Project, Second of Two Inspections, September 2015, prepared by Barry Martin Consulting Engineer and Architect for Baffinland, dated Nov 2015.

cc. Justin Hack, Erik Allain (AANDC)
Erik Madsen, Tony Woodfine, Bikash Paul, Bernard Laflamme (Baffinland)