



Inspection Report

License #: 2BB-MRY1114

Inspector: A. Keim

CIDMS # 739752

Client	Baffinland Iron Mines		
Mailing Address	James Millard, M.Sc., P.Geo. Senior Environmental Superintendent Baffinland Iron Mines Corporation Suite 1016, 120 Adelaide Street West Toronto, ON M5H 1T1		
Inspection site location	Mary River Project – Mary River Camp/ Milne Inlet Camp/ Steensby Camp		
Contact name	Jim Millard	Title	Senior Environmental Superintendent
Last inspection date	July 14, 2007	August 8 th , 2008	July 14, 2009
	July 11, 2011	March 20, 2012	August 1&2, 2012
	May 4&5, 2013		
Inspection start date	August 15-17, 2013		
Region	Qikiqtani		



AANDC Nunavut Regional Office
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Submitted by E-Mail

Our File: 2AM-MRY1325
2BB-MRY1114
8BC-MRY1314

Your File: _____
CIDM # 739752

September 11, 2013

James Millard, M.Sc., P.Geo.
Senior Environmental Superintendent
Baffinland Iron Mines Corporation
Suite 1016, 120 Adelaide Street West
Toronto, ON M5H 1T1

RE: Water Licence Inspection Report – Mary River Project – Mary River Camp, Milne Inlet Camp and Steensby Inlet Camp August 15 though 17 2013.

The following inspection report is generated on the findings of a compliance inspection carried out on the Mary River camp and facilities generally located at Latitude 71 18'30" N and Longitude 79 23'30" W, the Milne Inlet Camp and facilities generally located at Latitude 71 52 56.0 N and Longitude 80 54 23.0 W and the Steensby Inlet Camp and facilities generally located at Latitude 70.29280 N and Longitude 78.48245 W in the Qikiqtani Region of the Nunavut Territory.

The inspection was conducted to determine compliance with the terms and conditions of the Water Licenses for mining and milling operations including (2BB-MRY1114) and (2AM-MRY1325) issued to Baffinland Iron Mines Corp. by the Nunavut Water Board (NWB). Additionally, special consideration was given to the associated construction activities that were on-going at Milne Inlet Camp under the authority of newly issued Water license (8BC-MRY1314).

The report references the applicable parts of the three Water Licenses as applies during the Inspection. During the writing of this report a compliance review was undertaken of the documents, plans and manuals filed by the Licensee and located on the Nunavut Water Board's FTP site.

The Inspector would like to also thank Mr. Trevor Myers, Environmental Supervisor and Mr. Jim Mallard-Environmental Manager both for taking the time to assist and accompany Inspectors during the inspection.

With respect to the current authorizations;

- 2AM-MRY1325 was approved by the Minister of Aboriginal Affairs and Northern Development Canada on June 10th, 2013
- 2BB-MRY1114 was renewed for an additional 4 years by the Nunavut Water Board on April 5 2011
- 2BE-MRY- Application withdrawn from consideration of the board by Baffinland on March 30, 2012
- 8BC-MRY1314 – was approved by the Nunavut water Board on May 24, 2013.



The Inspection was conducted between August 17th and 19th 2013. Activities associated with the project were centered on the unloading and transportation of freight between Milne Inlet and Mary River camp and the on-going construction activities occurring at Milne Inlet Camp.

Activities noted at Mary River Camp were as follows;

- o Quarry construction/ Opening (new location)
- o General maintenance on the Milne Inlet Tote Road for transit between the two camps
- o General Maintenance on Mary River camp
- o Ramp up of Camp and site activity at the Mary River Camp site to facilitate increased staff presence on site.
- o New pad construction for new camp
- o Hazwaste consolidation for shipment off site

At the time of the Inspection no mining or exploration activities were on-going. Work was focused on the development of the site.

Issues and concerns from the last inspection were addressed as follows;

- Water treatment system; the unit is designed to be run as two units running concurrent or parallel to each other. Demand necessitates the operation of the secondary or slave unit. The unit is not designed as a redundant system.
- Minor spills at fuel bladder for the gen system have been cleaned up and the hose replaced
- Spill kits are to be accessible at all times
- Exterior signage (Waste Management Area) was replaced.

No major instances of Non-compliance were noted at the Mary River Camp (Mine site) Facilities. The Licensee is reminded that the policing and management of the solid waste facility is to be maintained as a high priority. During the Inspection a battery and other wildlife attractants were identified within the facility.

As noted previously in the May Inspection report, the 2012 Annual report had been filed in accordance with the issued license. Included in the list of submissions with this report were as follows;

- o A chronological record of submissions to the Inspector and the Nunavut Water Board.
- o An up-dated Abandonment and Reclamation plan (Appendix F)
- o An Up-dated and renamed Spill Contingency plan now called the Environmental Response and Spill Contingency Plan (Appendix F2)
- o A Surface Water and Aquatic Ecosystem management Plan (Appendix F3)
- o A Fresh Water Supply, Sewage and Waste Water Management Plan (Appendix F4)
- o A Comprehensive Environmental Monitoring Plan (Appendix F5)

Activities and issues noted at Steensby Camp were as follows:

- o Geotechnical investigation of surrounding area including ground geophysics, Mag and gravity surveys were on-going
- o 20 Geologists were on site in addition to camp and support staff (35 total)
- o The source for water for the camp remains 3 mile lake. Water is pumped from the lake to tanks on site where it is treated (UV and filters) then used for camp activities.
- o Camp operations included the disposal of waste in a dual fired incinerator.



- o Construction of a new greywater sump had been undertaken in 2012. The sump was found to have overtopped at some point in the past. Basic maintenance work was required to ensure the containment of greywater.
- o No shipments of hazardous waste from the Steensby camp had been undertaken at the time of the inspection.
- o Waste stream management on site requires a more concerted effort toward enforcing the segregation of aerosols and other hazardous wastes from entering the incineration stream.
- o 150 barrels of contact water from within the containment area require proper management and treatment on site.
- o The camp was found in good condition and being well maintained. Minor issues such as the wrapping of fuel connectors with absorbent pads and the policing of fuel lines to remain within the confines of the secondary containment would prevent the majority of minor spills.
- o Human waste is collected in 45 gallon drums. It is expected this will be transported off site as hazardous materials in the coming year.

No major issues of noncompliance were identified during the period of Inspection. Housekeeping and waste stream management (education) should be the focus of a concerted effort by camp management to prevent accidents and hazardous wastes from being diverted from proper disposal.

Following the inspection at Steensby inlet the Inspectors returned to Mary River. Upon return to camp the Inspector and Trevor Myers were able to grab a vehicle and travel to Milne Inlet Tote Road to Km 69.

The road was found to need work in a number of locations but was found to be in sufficient repair to facilitate the transport of materials from Milne inlet to Mary River. The roadway however will require major work to be used as a haulage road from the mine site to the port at Milne inlet. This will include the widening of bridge crossings, a resurfacing and compacting of the roadway and the installation of a number of larger culverts. This work is expected to begin in 2013.

Activities noted at Milne Inlet (Port)

- o Construction and site preparation activities were found to be on-going throughout the site during the period of the Inspection.
- o Two large pads has been constructed to facilitate the construction of both a temporary construction camp as well as that of more permanent infrastructure including;
 - o an additional 5 million litre fuel tank
 - o construction of two 10 million litre tanks,
 - o pad construction for the installation of three prefabricated 10 thousand litre tanks for the storage of jet fuel
 - o a waste water treatment facility,
 - o offices and other associated facilities'
 - o a construction garage and maintenance area
 - o construction of an additional waste water polishing pond (lagoon)
 - o a larger more permanent camp with arctic corridor
- o The opening of the Q1 Quarry site had begun and crushing of materials for construction was on-going during the inspection. No blasting activities were undertaken during the period of inspection.
- o Two large lay down areas for the storage of materials off loaded from the ships had been completed at the time of the inspection. It was noted that ore, possibly left over from the bulk



sample and stored on site at Milne inlet had been used in the construction of one of the pads. This was not included in any plans reviewed by the inspector.

- o The incineration area (newly relocated) found on site was found to contain a large backlog of combustible waste and other waste. It appears that the ship had off loaded this material at the camp for incineration and disposal. The one unit was found to be overwhelmed and additional storage for the waste materials was required to prevent it from being wind blown and acting as a wildlife attractant.
- o The bladder farm was being decommissioned during the period of inspection. Piping was being removed and only four bladders containing fuel remained within the facility. Plans to land farm the facility were being worked out with the expectation that the work would begin. It is unclear if this work has begun yet or not.
- o Hazardous wastes were noted to still be on site and awaiting shipment.
- o On-going monitoring and water quality monitoring was being conducted at sites off the pad and down gradient on a regular basis. These results are to be included in the annual report.

Noted during the inspection were the following issues;

- o The current incinerator is not sufficient to handle all produced wastes. Extra storage (sea-cans) was to be installed adjacent to the incinerator area to secure kitchen and other paper wastes. Policing of the waste management stream is also to be a high priority during this period of transition and construction.
- o The Water treatment system at the new temporary camp was not found to be operating as designed and the UV system was off line. This was addressed with the staff on site and parts were found to be on-order and expected in the near term.
- o Dust suppression measures at the crushing unit were not in operation. This was to be addressed and monitoring was on-going. The results of which are to be included in the annual report.
- o The use of crushed ore to construct the pad within 30 meters of water was of surprise to the inspector. It is unclear what effect the oxidation of the ore will have on the beachfront. This is to be monitored by the licensee.

Non-Compliance: Issues identified during the inspection and/or review of relevant material

Issues with a known or anticipated human health impacts;

- o No significant findings.

Issues where there is a known or anticipated environmental impairment;

- o Monitoring of fuel storage and transfer areas is to be completed on a daily basis.
- o Dust suppression efforts are to be maintained past the period of construction and into development. Monitoring results are to be provided to both the Nunavut Water Board and the Inspector on a regular basis.
- o Water treatment systems are to be maintained in working order at all times.
- o Solid Waste Management during the period of construction is to be maintained and policing of sites for final disposal such as the Land fill and Incineration units is to be done on a regular basis to prevent reduce the occurrences of hazardous and or dangerous materials being deposited there. Educational materials should be posted.

Issues where there is a known or suspected violation of a requirement of the Water License;

- o None.



A. Keim
Inspector's Name

Original signed – Sent by E-Mail
Inspector's Signature

Cc:

Erik Allain - Manager Field Operations Section- AANDC - NRO
Phyllis Beaulieu – Manager licensing – Nunavut Water Board