



Environment and
Climate Change Canada

Environnement et
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Solomon Amuno
Technical Advisor,
Nunavut Impact Review Board,
P.O. Box 1360,
Cambridge Bay,
Nunavut, X0B 0C0

Via email to info@nirb.da

**RE: Comment Request for Baffinland Iron Mines Corp.'s Mary River Project 2015
Annual Monitoring Report**

Attention: Mr. Amuno,

Environment and Climate Change Canada (ECCC) has reviewed the above-mentioned monitoring report and is submitting the comments below for consideration. ECCC's specialist advice is provided in the context of the *Canadian Environmental Protection Act*, the pollution prevention provisions of the *Fisheries Act*, the *Migratory Birds Convention Act* and the *Species at Risk Act*.

Comments:

Effects Monitoring:

Overall ECCC would like to acknowledge the extensive work that has been done by Baffinland Iron Mines Corporation (Baffinland) on the various components of the 2015 Annual Report and notes that the updates made to the monitoring and management plans addressed the comments raised by ECCC in 2014 and 2015.

During the Annual Report review ECCC found Table 1 in the Executive Summary to be a very useful reference and encourages Baffinland to include a similar summary of results showing comparisons to thresholds or benchmarks for each monitored component in the Aquatic Effects Monitoring Program (AEMP). ECCC is of the opinion that the 2015 AEMP revisions for water and sediment monitoring are reasonable, but notes that more

discussion of fish monitoring will be required in connection with the Environmental Effects Monitoring program and regarding AEMP sample numbers.

The attached table is a compilation of comments ECCC provided to Baffinland during Marine Environment Working group meetings. Baffinland did not incorporate ECCC's comments into the final version of the Marine Monitoring Plan, however, Baffinland has indicated that the comments will be addressed in the next iteration of the report. ECCC has included these comments here to ensure that the NIRB and other parties are aware of them and of the progress that is being made in the Marine Environment Working Group.

Compliance Monitoring:

On July 10, 2015, Baffinland's Mary River Project became subject to the Metal Mining Effluent Regulations (MMER) under the *Fisheries Act* after discharging more than 50 m³ of effluent per day from a mine waste-rock settling pond. As required under sections 8 and 9 of the MMER Baffinland provided ECCC with the relevant mine identification information and details regarding the mine's final discharge point(s). Since being captured by the MMER, Baffinland has also submitted 3rd and 4th quarter reports; no non-compliance issues were identified during the review of those reports.

ECCC has not issued any authorizations to Baffinland and ECCC Environmental Enforcement staff did not conduct any inspections at the Mary River site in 2015.

Errata:

While reviewing Part 7 of the AEMP ECCC noted that the titles and tables in the Intrinsic report which is included as Appendix D Development of Final Sediment Quality Benchmarks are illegible.

Should you have any questions regarding the foregoing please contact Mark Dahl at (204) 983-4815 or via email at mark.dahl@canada.ca.

Sincerely,



Mark Dahl
A/Head, Environmental Assessment North
Prairie and Northern Region

cc: Robin Ikkutisluk, Licencing, Nunavut Water Board
Wade Romanko, Head, Environmental Assessment North (NT and NU).
Mark Dahl, Environmental Assessment Coordinator, PNR.
Francois Huppe, Manager, Environmental Assessment and Marine Programs, PNR
ECCC Review Team

Attachment: ECCC Comment Table

ECCC comments provide during Marine Environment Working Group Meetings

No.	Reference	Comment
1	Section 3.0 – Results	The results for water quality and sediment quality both make reference to differences between previous year's data and the 2015 sampling period. In some cases the 2014 data are referenced in the text, or are shown on graphs. It would be useful to have a summary of baseline data to support how water quality and sediment quality differ between sampling years. At a minimum, the report "Field Report on Marine Environmental Effects Monitoring Program (MEEMP), Milne Inlet June and August, 2015, Sikumiut Environmental Management Limited" should be referenced.
2	Section 3.1 – Water Quality	Water quality sampling was conducted at 4 sampling locations on three occasions in August of 2015 (August 11, 19, and 30). However, only a single duplicate QA/QC sample (August 11) was collected during these three sampling times. QA/QC sampling should be completed with each sampling event. In addition to duplicate sampling, trip blanks and field blanks should be completed to ensure quality and accuracy of the samples collected. An equipment blank should also be done at the end of sample collection in the field (this might be useful for the anomalous mercury results). On average 15% of samples should be collected for QA/QC.
3	Section 3.4 Fish and Mobile Epifauna	The report indicates that both gill nets and Fukui traps were used during the fish sampling. Fukui traps were primarily set in the vicinity of the ore dock while gill netting effort was focussed on traditional fishing areas. The data were then combined in order to evaluate the relative abundance of fish species in Milne Inlet. Given the two different sampling methods, data collected by the two methods are not directly comparable. It would be useful to include some discussion of how the use of the two methods, which may preferentially select for different fish, could bias the understanding of the population and the fish species which are present in Milne Inlet (as was done for CPUE).
4	Section 3.4 Fish and Mobile Epifauna	The report indicates that fishing locations were not based on the radial gradient design and were instead loosely targeted to the Milne ore dock and the shoreline of the east dock. Other than this statement there is no indication of how fish sampling stations were selected. Please clarify how fish sampling station locations were selected and whether the sampling sites are comparable to previous years sampling programs.
5	General question	The tidal amplitude in Milne Inlet appears to be approximately two metres at the maximum spring tides at the head of the Inlet (per tide tables) and the ASL study (Oceanographic Data Processing - Baffinland Ballast Water Study, Milne Inlet 2014-15) appears to indicate similar amplitudes in the port site. Is monitoring timed to be at a comparable tide stage for each year? What effects (if any) does the tide have on the field monitoring?