

Template for Appendix A

In accordance with the Project Certificate [No.005] issued by the NIRB on December 28, 2012, and amended on May 28, 2014, for the Mary River Iron Mine Project, this Appendix is to provide direction to Baffinland Iron Mines Corporation (Baffinland or Proponent), NIRB's Monitoring Officer, Government departments and authorizing agencies regarding the Monitoring Program established pursuant to Article 12, Section 12.7 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada* (Nunavut Agreement).

The purpose of the Monitoring Program as set out in Article 12, Section 12.7.2 of the Nunavut Agreement shall be:

- (a) To measure the relevant effects of projects on the ecosystemic and socioeconomic environments of the Nunavut Settlement Area;
- (b) To determine whether and to what extent the land or resource use in question is carried out within the predetermined terms and conditions and commitments made within the Final Environmental Impact Statement (FEIS) or FEIS Addendum including Final Hearings;
- (c) To provide the information base necessary for authorizing agencies to enforce terms and conditions of land or resource use approvals;
- (d) To assess whether the accuracy of predictions contained in the project impact statement continue to be valid, and where possible recommend updates to ongoing environmental monitoring; and
- (e) Contribute to the management and monitoring of regional cumulative effects, including socioeconomic effects resulting from past, present and reasonably foreseeable future developments and changing environmental conditions.

Baffinland responsibilities related to this Monitoring Program:

General

1. Ensure that a comprehensive post-environmental assessment monitoring program (PEAMP) is developed for the Mary River Project, in accordance with commitments made in the FEIS or FEIS Addendum including Final Hearings. The objective of the PEAMP shall be to:
 - a. Measure the relevant effects of the project on the ecosystemic and socioeconomic environments.
 - b. Assess the accuracy of the predictions made within the original FEIS and FEIS Addendum.

The PEAMP must utilize, to the extent possible, the various monitoring plans developed by Baffinland, as described in the FEIS and FEIS Addendum, including Final Hearings, the amended Project Certificate, and all monitoring plans required by applicable Authorizing Agencies.

As part of the PEAMP, Baffinland is required to forward to NIRB all monitoring and mitigation plans upon completion or as amended or updated.

2. Submit an annual report to NIRB at an agreed-upon time or by April 30th of each year the project is in operation until the post-closure phase of the mine site. The report must contain, the following information:
 - a. A summary of evidence indicating how Baffinland has carried out the project in relation to the terms and conditions contained within the amended Project Certificate.
 - b. A summary of the results from the PEAMP including:
 - i. An analysis regarding whether or not the project is operating in accordance with the predicted impacts identified in the original FEIS, FEIS Addendum, or as discussed at the Final Hearings. This analysis should include:

- a) All relevant data (baseline and monitoring) to support impact predictions and effects conclusions.
- b) An analysis of the effectiveness of mitigation measures and discussions regarding any necessary adaptive mitigation strategies employed onsite.
- c) Explicit conclusions related to whether or not the project is operating in accordance the predicted impacts identified in the original FEIS or FEIS Addendum, including at the Final Hearings.
- d) A summary of Baffinland's progress with respect to meeting the commitments set out in Appendix A of the Final Hearing Report (dated September 14, 2012), as well as compliance status with all authorizations and applicable regulations and guidelines associated with the project.
- e) A description of all instances of non-compliance and associated follow up, as well as summaries of all accidents or malfunctions, including incidents involving injuries or deaths, and the actions taken to remedy any occasion of non-compliance with environmental laws and regulations and/or regulatory instruments.
- ii. Ensure that all baseline data including monitoring information collected pursuant to the Project Certificate and various regulatory requirements for the approved Project shall contain the following information:
 - a) The name of the person(s) who performed the sampling or took the measurements including any relevant accreditations.
 - b) The date, time and place of sampling or measurement, and weather conditions.
 - c) The date of analysis.
 - d) The name of the person(s) who performed the analysis including any relevant accreditations.
 - e) A description of the analytical methods or techniques used.
 - f) A discussion of the results of any analysis, including implication for long-term environmental monitoring.
- iii. A detailed analysis of the impact of the approved project upon the biophysical and socioeconomic environments.
- c. A summary of all authorizations obtained to date for the project, including any requested renewals, updates, modifications, amendments or extensions to existing authorizations. The Proponent must forward to NIRB copies of all authorizations obtained and required for the project on an as-received basis.
- d. A summary of activities undertaken for the year, including any suspension of work, stop-work orders or penalties, and a detailed work plan for the activities occurring in the following year – site photos should be provided where relevant.
- e. A summary of community consultations conducted with affected communities, including any public information sessions, and/ or monitoring updates and the results of engagements.
- f. A summary of site-visits by inspectors with results, including discussion of any follow-up actions undertaken by the Proponent to address inspectors' concerns or issues.
- 3. When the objective of a Project Certificate term or condition can be achieved through more efficient alternate means, the Proponent is encouraged to consult with the NIRB (and other parties as required) to seek acceptance of proposed alternatives prior to implementing any changes to monitoring programs.
- 4. The Proponent shall make its monitoring results available, to the fullest extent possible, in English and Inuktitut.
- 5. The Proponent shall keep and maintain the records, including results, of all Project-related monitoring data and analysis for the life of the Project, including closure and post-closure monitoring.
- 6. The Proponent shall maintain the FEIS or FEIS Addendum and the associated Environmental Effects Monitoring program developed for the Project, with predictions updated as new baseline data is collected.

7. The Proponent shall establish a Project-specific web portal or web page as a means of making all non-confidential monitoring and reporting information associated with the Project available to the general public. This does not limit what the Proponent may be required to submit to the NIRB or other regulatory authorities to meet reporting requirements.

Terrestrial and Marine Environment Working Groups

8. Ensure that the Terms of Reference for both the Terrestrial Environment Working Group (TEWG) and Marine Environment Working Group (MEWG) appropriately reflect the organizations that are involved in the working groups, and if necessary provide additional clarity to expected level of participation for the various groups participating.
9. Provide record of discussions, including meeting notes for TEWG and MEWG meetings, with information regarding how meetings are structured to allow for meaningful engagement. Consideration should be given to adoption of a consensus-based or quorum decision-making process to ensure that the record properly reflects parties' full contributions and inclusion of expertise, prior to implementing any changes to ongoing terrestrial and marine monitoring programs.
10. The Proponent shall report annually regarding its terrestrial and marine environment monitoring efforts and provide evidence of how specific Project Certificate terms and conditions have been addressed during the reporting year, or incorporated into ongoing monitoring programs, and including implementation of adaptive management (Note Conditions: 14a, 14b, 21, 49, 52, 54, 61, 73, 77, 99, 101, 103, 105, 109, 110, 111, 112, 114, 122, 125-128, 164, 182).
11. Provide evidence of engagement with the TEWG and MEWG during each reporting year, specifically showing how it engaged in the review, discussion, and comment of the results and analyses from its monitoring programs, how mitigation measures have been considered in light of the results, as well as current and proposed changes to adaptive management plans.
12. Provide a summary of all the work undertaken by the TEWG and MEWG each year, including when the working groups was solicited for advice and comment, what documents the members had been requested to review, and an overview of the discussion of program results.
13. Outline procedures for determining the sample size, frequency, and duration for each of the aerial, acoustic, and shore-based observation surveys to be undertaken as part of the ongoing marine mammal monitoring program.
14. Provide a rationale for any proposed changes to the acoustic surveying work as noted above, and any other proposed changes to marine mammal monitoring programs currently being contemplated.
15. Compare its on-going terrestrial and marine environment monitoring practices to the protocols and commitments set out in Appendix A of the Final Hearing Report (dated September 14, 2012).
16. Provide a summary of the inputs received from MEWG members or other parties regarding the marine mammal monitoring programs and review and analyses of their results, including findings and interpretations of results from the Bruce Head, acoustic, and aerial survey work undertaken during field seasons and that results be made publicly available.
17. Provide update regarding all the local knowledge gathered that has contributed to its overall understanding of, and monitoring programs related to terrestrial wildlife, including caribou abundance. Specifically:
 - a) Provide evidence of engagement with the GN regarding what relevant regional caribou monitoring programs are to be undertaken or ongoing, and where possible confirm how or if collaboration on these regional monitoring programs with the GN could be considered as a contribution toward Baffinland's project specific monitoring.
 - b) Provide evidence of an opportunity for public comments prior to approval to make change to terrestrial monitoring program, including carnivore monitoring.

Socio-Economic Monitoring Program:

18. Provide evidence of engagement with the Qikiqtaaluk Socio-Economic Monitoring Committee (QSEMC) and Mary River Socio Economic Monitoring Working Group (SEMWG), including a

summary the inputs received from the QSEMC and SEMWG members regarding socio-economic monitoring and performance of the Mary River Project and its compliance with various Project Certificate conditions.

19. Ensure that the Terms of Reference for Mary River SEMWG appropriately reflect the organizations that are involved in the working group, and if necessary updated where applicable, in accordance with commitments made in the FEIS or FEIS Addendum FEIS and/or the Final Hearings, and describe the Working Group's purpose; membership and member roles; objectives; and reporting, communication, decision making framework and meeting requirements.
 - a) Provide additional clarity on all relevant Valued Socio-Economic Components (VSECs) and indicators used to assess the socio-economic performance of the Mary River Project and measures for achieving compliance with relevant Project Certificate conditions.
 - b) Identify what relevant socio-economic information or data (qualitative and quantitative) each member of the Mary River SEMWG would be contributing to the ongoing socio-economic monitoring program, including sources of historical data from companies, intake forms at the mine and surveys to answer specific questions.
 - c) Outline procedures for determining the sample size, sampling duration and reporting frequency for each of the VSECs and indicators as part of the ongoing socio-economic monitoring program.
20. Submit an annual socio-economic monitoring report each year the project is in operation until the closure phase of the mine site. The report must contain, but is not limited to, the following information:
 - a) A summary of the socio-economic indicators and data sources for all VSECs used for assessing socio-economic performance included in the FEIS or FEIS Addendum including Final Hearings and Project Certificate including a summary of all the work undertaken by the Mary River SEMWG, and responses to recommendations or directions issued by the Working Groups, QSEMC and other agencies;
 - b) Reference to qualitative and quantitative baseline and monitoring data used to support socio-economic impact predictions and effects conclusions, with a discussion of data collection methods, including data analysis and interpretation;
 - i. A discussion of the compliance status of the Project with respect to socio-economic terms and conditions of the Project Certificate;
 - ii. A summary of monitoring data related to the regional and cumulative economic effects (positive and negative) associated with the approved Project and any proposed mitigation measures being considered necessary to mitigate the negative effects identified.
 - iii. Discussion of data limitations, including any deficiencies in statistical analysis and trends of socio-economic performance at different spatial scales (i.e. Local Study Area or Regional Study Area);
 - c) A summary of public/community consultation conducted, including employee and public surveys undertaken and related results in support of socio-economic monitoring efforts.
 - d) Identification of areas where Baffinland's existing socio-economic mitigation and management programs may not be functioning as anticipated, and a work plan to address deficiencies;
 - e) A summary of all data gaps identified through engagement with the QSEMC, SEMG and Baffinland community engagement and the additional data and monitoring required before FEIS or FEIS Addendum predictions can be fully verified.

NIRB Monitoring Officer's responsibilities related to this Monitoring Program:

1. Provide direction to the Proponent, project-specific working groups, regulatory authorities, and the Qikiqtaaluk Socio-Economic Monitoring Committee to supply NIRB with reports and

information respecting the Project's operations, impacts and the implementation of mitigative measures;

2. Conduct a periodic evaluation of the monitoring program for the Project;
3. Conduct two site visits annually, coordinating with other regulatory agencies to the extent possible.
4. Compile an annual report on the adequacy of the monitoring program and on the ecosystemic and socio-economic impacts of the Project, including:
 - a. Discussion on the purpose of the monitoring program;
 - b. Results achieved through the annual monitoring cycle;
 - c. Adequacy of the monitoring program; and
 - d. Advise the Board regarding action to support greater compliance with the terms and conditions of the Project Certificate;
5. Where appropriate, recommend to the NIRB reconsideration of Project Certificate Terms and Conditions in accordance with section 12.8.2 of the Nunavut Agreement; and
6. Schedule periodic updates regarding its Monitoring Program for the communities most affected by the Project.

Regulatory Authorities (Government) responsibilities related to this Monitoring Program:

1. Provide any compliance monitoring and/or site inspection reports to NIRB's Monitoring Officer annually at an agreed-upon time or at by September 15th of each year. Any compliance report must contain, the following information:
 - a. How the Regulatory Authority has incorporated the terms and conditions from the Project Certificate into their permits, certificates, licences or other government approvals, where applicable.
 - b. A summary of any inspections conducted, and the results of these inspections.
 - c. A summary of Baffinland's compliance status with regard to authorizations that have been issued for the Project.