



Mary River Project

2012 Work Plan

Attachment 6

Addendum to 2011 Abandonment and Reclamation Plan in Support of the 2012 Work Plan

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1. Introduction

The 2011 Abandonment and Reclamation Plan (February 2011) for the Mary River project was submitted as requirements under Baffinland's renewed Type B water license and under its Commercial Land Lease with the QIA. This addendum document outlines the closure activities planned for in the Baffinland 2012 Work Plan as well as an estimate of the closure liabilities incurred up to the point of the decision to abandon and reclaim. The applicable guidelines and policies, and abandonment and reclamation objectives and criteria adopted for the 2012 Work are the same as outlined in the existing February 2011 A&R Plan.

This addendum to the A&R Plan is submitted as part of the 2012 Work Plan for the Mary River project. The range of activities is described in the text of the work plan document submitted on December 15, 2011. This addendum provides a summary of the activities and an estimate of the costs for abandonment and reclamation for 2012 activities should the project not be approved.

A decision on the Project Certificate is expected for Q3 2012. In the event of a positive decision, and the Project Certificate is granted, Baffinland will proceed immediately with the construction of the Project. In the event of an unfavourable decision, Baffinland will reassess its decision to carry on with the Mary River Project as currently defined in the DEIS. After further consultations with NIRB, and the land owners (QIA and AANDC), Baffinland will make its decision with respect to abandonment and reclamation of the 2012 work sites. Note that a decision to implement the A&R plan for 2012 work does not mean that Baffinland would abandon its current bulk sampling and exploration program for which it holds valid authorizations, licenses and permits. Security for the existing bulk sampling and exploration project is currently held by QIA and the Crown in the form of letters of credit.

The 2012 A&R plan assumes that the decision to abandon & reclaim the sites would be taken after:

1. The completion of 2012 work activities at Milne Inlet, the Mine Site and Steensby in Q4 2012.
2. The conclusion of further consultations with both the QIA and AANDC on an appropriate path forward regarding the future development of the Mary River Project.

At the earliest, it is expected that A&R activities for the 2012 work would commence during the open water shipping season of 2013, and be completed by the end of the 2013 open water season.

Note that since an adverse decision on the Project as presented in the DEIS, does not mean that Baffinland would abandon all exploration activities for which it currently holds valid license and authorisation it is assumed that A&R work would be undertaken for the 2012 associated activities only.

2. 2012 Planned Work

The activities of the 2012 work and the associated impact assessment are summarized in the main text of the Baffinland 2012 Work Plan and are associated with the site capture and staging of equipment and materials to allow for more efficient implementation of the project execution plan. This requires:

- The receiving and installation of one 1.5 million litre (ML) fuel tank in the fuel farm at Milne Inlet;
- The receiving and installation of one 1.5ML fuel tank and construction of one 5 ML fuel tank and containment at the Mine Site;
- The production of aggregate required for the containment area of the fuel farm at the Mine Site;
- The installation of a new effluent discharge at the Mine Site;
- The installation of a 50 person camp at Steensby Inlet with required infrastructure;
- The receiving and staging of earth works equipment at Steensby Inlet;
- The installation of seven doubled walled 100,000 L ISO fuel tanks at Steensby Inlet;
- The locating of a fuel barge (up to 10ML) at Steensby Inlet; and
- The receiving of explosives at the Mine Site and Steensby Inlet.

3. Abandonment and Reclamation (A and R) Activities Following 2012 Work

These activities are described in sections 2, 3 and 4 of the 2012 Work Plan. The principal activity is the reversal of the staging of the materials and equipment, that is the removal of all the equipment and materials and reloading onto marine transport vessels and return to port of loading for return to the manufacturers or for re-sale. Infrastructure installed and operated as part of 2012 work activities at Steensby Inlet will be decommissioned and returned to the port of loading. In addition, all equipment and remaining materials used to support quarry operations at the Mine Site will be shipped off-site at the end of quarry use. Hazardous materials will be shipped off site to an approved disposal facility. Natural drainage will be restored and lay downs re-contoured as appropriate.

The 2012 Work A & R implementation plan involves the following principal activities:

1. Shipping of all sealift material from Steensby Inlet to home port - the cost for these activities are estimated by assuming each ship can hold 15,000m³.
 - ♦ It is assumed that a Dock Barge capable of withstanding between 150 and 250 tons of deck load is needed in support of loading of sea lift vessel for 2.5 months; and
 - ♦ It is assumed one tug boat to tow the Dock Barge is needed to support of loading of sea lift vessel for 2.5 months.
2. Preparation and loading material and equipment on to sea lift in 2013. This includes marshalling and loading of all containers unloaded in 2012 sealift.
3. Closure of 2012 Work quarry at the Mine Site.
4. Dismantling and return to port of loading of the construction camp at Steensby Inlet and explosives magazines at Steensby Inlet. Only exploration camps will remain to support reclamation activities and further exploration programs.
5. Removal of seven (7) 100,000 L ISO fuel tanks at Steensby Inlet in 2013. The new 5 ML & 1.5 ML tanks at Milne Inlet and Mary River, which replaced the fuel bladders, would remain for exploration use.
6. Return of natural drainage at Steensby Port in 2013 to complete final reclamation of Steensby Port in time for the 2013 sea lift.
7. 2014-2016. Annual summer post closure monitoring for 3 years as part of the overall A & R monitoring plan. Following removal of 2012 work camp at Steensby Inlet and associated infrastructure this would be carried out using helicopter support to ferry in the qualified personnel and monitoring equipment.

3.1 Schedule

The execution of the 2012 Work A & R plan would be carried out from the end of Q3 2013 to the end of Q3 2013.

During the open water seasons of 2013 most of the material and equipment brought up in 2012 would be returned to port of loading. During 2014 reclamation of the quarry at the Mine Site used for 2012 work would be completed and rehabilitated land farmed material from Milne Inlet would be used in reclamation. All 2012 work lay downs would be reclaimed and water courses returned to their natural drainage pattern. Post closure monitoring would continue during open water seasons for three years from 2015-2017 or until reclamation objectives approved by the authorities have been met.

4. Estimate of 2012 Work Closure Costs

The A & R plan cost estimate is provided in Table 1. The costs are based on the assumption that the resources required for closure will be similar to the cost estimate that is being generated for 2012 work execution (currently an estimate is being used since the 2012 work has not yet been carried out). As an example, the cost of shipping the same material back to the port of origin has been assumed to be the same as the estimate for shipping costs received from a shipping company for 2011 as both require a single seallift.

Similarly the labour costs for decommissioning of the explosives magazines and camp constructed as part of 2012 work are assumed to be the same as for the labour and equipment cost estimate for construction. This is a reasonable estimate since decommissioning is less complex and labour intensive than for construction staging and therefore costs will be less. However, costs are assumed to cover reclamation. Other costs have been estimated based on the assumptions laid out in Table 1.

Table 1: 2012 Work Abandonment & Reclamation Estimate

2012 Work Closure Costs			
	Activity	Cost estimate (\$ CAD)	Comments
Closure decision made in Q1 2013 before the 2013 sea lift. All 2012 Work A&R activities completed by end of open water season of 2013.			
1	Sea-Lift Cost	2,460,000	A full ship is 15,000 cubes, 2.5 cubes/revenue tonne, at \$205/revenue tonne backhauled. One full ship = \$1.23M. It is estimated two sealifts are needed based on material volume. Source: Baffinland Iron Mines 2011 Sealift Costs
2	1 Dock Barge with spuds & ramps for 2.5 months	300,000	\$120,000/month. Based on McKeil Innovative Marine Solutions Budget Quote (2011)
3	Insurance on Dock Barge for 2.5 months	15,000	\$6,000/month. Based on McKeil Innovative Marine Solutions Budget Pricing (2011)
4	Dock Barge Operators for 2.5 months	225,000	\$90,000/month. Based on McKeil Innovative Marine Solutions Budget Quote (2011)
5	Tug Cost with Crew for 2.5 months	1,162,500	\$465,000/month. Based on McKeil Innovative Marine Solutions Budget Quote (2011)
6	Fuel Cost for Tug based on Arctic Rates for 2.5 months	780,000	\$312,000/month. Based on McKeil Innovative Marine Solutions Budget Quote (2011)
7	Preparation and loading material and equipment on to sea lift in years 2	2,463,544	Based on Labour budget required for 2012 work at Steensby Inlet. Total Labour budget for 2012 work is \$5.4 million, with 1473 total man weeks. 672 Man weeks are allocated to Steensby Inlet.
8	Camp operating costs during A&R activities	564,480	Extra camp costs for A&R equal to labour requirements at Steensby during 2012. 672 man/week*\$840/week. \$840/week based on indirect cost per/person of large artic camp cost being \$60/person/day which was then doubled due to smaller camp size.
9	Closure of quarry at Mary River		Included in #8
10	Dismantling of construction camps and explosives magazine Steensby Inlet and return to south via sealift		Included in #7
11	Return of natural drainage and re-profiling of lay downs at Steensby Inlet		Included in #7
12	Post closure monitoring: 3 yrs	300,000	\$100,000/year
	Total	8,270,524	
	Contingency 20%	1,654,105	
	TOTAL	9,924,629	