



Baffinland Iron Mines Corporation - Mary River Project Fresh Water Supply, Sewage, and Wastewater Management Plan

# **Appendix A Table of Concordance**





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### 1. Table of Concordance

## **Project Certificate Terms and Conditions**

#### **Groundwater and Surface Water**

No.	Terms and Conditions	Comments
24	The Proponent shall monitor as required the relevant parameters of the effluent generated from Project activities and facilities and shall carryout treatment if necessary to ensure that discharge conditions are met at all times.	Refer to Sections 5.2 and 6.1.





# **APPENDIX B – 2013 Work Plan and Site Layouts**



#### 2013 WORK PLAN

#### 1.0 Introduction

The following document presents the activities Baffinland intends to undertake as part of its 2013 Work Plan. In the event the Project does not advance, all work items described and constructed as per the 2013 Work Plan will be subject to reclamation, as per relevant regulatory and permit obligations.

#### 2.0 Overview of Site Activities for March 2013 to December 2013

This 2013 Work Plan provides for:

- 1) The development and construction of infrastructure required for site capture at Milne Port and the Mine Site for the launching of the 18 MT Mary River Project.
- 2) Ongoing environmental baseline data collection and geotechnical drilling in order to sustain the development of the 18 MT Project. These activities will resume at the Milne Port site, along the Tote Road, at the Mine Site, at numerous quarry sites and at other Project development areas.

The specific scope of activities to be undertaken at each Project site is presented in Section 3 of this Work Plan. The Work Plan is presented within the context of the applicable regulatory authorizations and schedule.

Baffinland holds, or will soon hold, all the permits and authorizations required to carry out the 2013 Work Plan. The main regulatory instruments that allow for the 2013 Work Plan activities include:

- Project Certificate
  - o All works and activities proposed have been screened by the NIRB and have been considered in the Project Certificate issued by the NIRB on December 28, 2012.
- Type B Water Licence
  - The current Type B Water Licence (2BB-MRY1114) authorizes Baffinland to operate the existing sewage treatment plants, incinerators, landfill, wastewater treatment and other facilities regulated by the Nunavut Water Board. A request for a modification to this licence will be submitted shortly, for the construction of an additional 5ML fuel tank construction within the existing secondary containment as well as for the construction of a second PWSP pond at Milne Port (these work items are discussed in section 3.1.2 of this letter). The Type B Water Licence also authorizes Baffinland to undertake mineral exploration and geotechnical drilling programs. Prior to March 31<sup>st</sup> 2013, Baffinland will submit to the NWB an update of all the environmental management plans associated with the Type B water Licence.
- Type A Water Licence
  - The final hearings for the Type A Water Licence associated with the Project Certificate are scheduled for April 23 to 25, 2013, in Pond Inlet. Baffinland expects that the Type A Water Licence will be granted by mid June 2013. The scope of the Type A Water Licence exceeds the requirement of the 2013 Work Plan for all

activities considered in this 2013 Work Plan. Following the issuance of the Type A Water Licence, Baffinland will submit to the NWB updates for the environmental management plans associated with this Water Licence.

#### Use and Storage of Explosives

 Baffinland's Explosives Contractor will obtain the necessary permits and authorizations from NRCan for the use and storage of explosive at the Project sites.
It is anticipated that these permits will be obtained prior to commencement of the 2013 Work Plan (expected in mid April 2013).

#### Quarry Permits

- o Schedule 'B' Quarry Concession Agreement under IOL Commercial Lease Q10C3001.
  - It is anticipated that quarrying of rock and gravel from permitted quarry locations (as shown on Schedule "A1") of this Lease will continue. In addition, Baffinland will be applying for access and quarry permits to extract rock and gravel material adjacent and near the existing Milne Inlet Tote Road by means of an Amendment to the existing Schedule 'B' to the Lease.
- The Project Certificate included the detailed assessment of 5 quarries. Two of these quarries will be developed at the onset of the 2013 Work Plan:
  - Quarry Q1 located at Milne Inlet a site specific Quarry Management Plan was provided in the FEIS (Volume 3, Appendix 3B, Attachment 6: Operation and Management Plan Milne Inlet Quarry). The surface area of the quarry is 200,000 m<sup>2</sup> and the volume of material to be extracted is approximately 300,000 m<sup>3</sup>.
  - Quarry QMR2 located at the Mary River Mine Site a site specific Quarry Management Plan was provided in the FEIS (Volume 3, Appendix 3B, Attachment 6: Operation and Management Plan Mary River Mine Site Quarry). The surface area of the quarry is 252,700 m² and the volume of material to be extracted is approximately 538,000 m³.
- o AANDC Land Use Permit and Quarry Permit to access existing and possibly new borrow and rock quarries adjacent and near the Tote Road.

#### 3.0 Scope of 2013 Construction Activities

#### 3.1 Pre-Sealift Activities – mid April to June 30, 2013

Construction activities will commence in April 2013. Equipment already on site will be used to begin earthworks and site preparation. Beginning in April 2013, key activities will include:

#### 3.1.1 Mary River Mine Site

 Operate the Mary River Exploration Camp and increase occupancy as of mid April 2013. The camp with its associated sewage treatment plant and incinerator will operate in accordance to the terms and conditions of Baffinland's Type B Water Licence.

- Fly in pre-packaged explosives to the Mary River airstrip and transport to explosives magazines at Milne Port for storage and use in quarry operations.
- Construct camp pad and begin installation of construction camp.

#### 3.1.2 Tote Road

Routine maintenance of the Tote Road will continue in 2013. The following activities will be undertaken prior to the sealift:

- Open the Tote Road (snow clearing) in early April;
- Relocate crusher train from the Mary River mine site to Milne quarry site (the crusher will be transported across river ice at four locations where box culverts are now in place);
- Follow up on the requirements pursuant to the Fisheries Authorization for the Tote Road Not Net Loss and Monitoring Program, QIA lease, and AANDC land permit and quarry permit requirements;
- Implementation of a freshet management plan for the Milne Inlet Tote Road to minimize associated environmental risks;
- Develop laydown areas for storage of explosive magazines (3 areas) in proximity of Q1 quarry at Milne Inlet. Position explosive magazines.

#### Milne Port

- Open the Milne Port camp site (mid April) and operate at full capacity (60 beds). Restart and operate the existing sewage treatment plant at Milne Port and the camp incinerator. The camp will operate in accordance with the terms and conditions of Baffinland's Type B Water Licence.
- Construct a second polishing waste stabilization pond (PWSP) at Milne in preparation for larger off-specification sewage treatment capacity during construction ramp up.
- Begin development of quarry Q1 1+100 (submitted with FEIS) to generate crushed and screened aggregate for the development of the Milne Port site. An estimated aggregate volume of 100,000 m<sup>3</sup> will be required for Milne Port site development.
- Earthworks at Milne Port prior to the sealifts will focus on the following areas:
  - Develop laydown area B (used for Owner/Contractor laydown);
  - Develop laydown area A for storage of material and equipment to be received during the 2013 sealift;
  - Develop pad for the expanded camp facilities;
  - Upgrade (extend) the airstrip runway;
  - o Construct fuel tank farm secondary containment area;
  - Construct one 5ML diesel fuel storage tank within the secondary containment constructed in 2011 (same construction as existing 5 ML tank);
  - Construct laydown area for waste storage/transfer;
  - Development of parking areas for heavy equipment and rolling stock fleet to be delivered during the sealifts.

#### 3.2 2013 Sealift – July 1<sup>st</sup> to October 1<sup>st</sup>, 2013

For Milne Port, it is expected that sealifts will occur between July 1<sup>st</sup> and October 1<sup>st</sup>, 2013. An estimated 14 barges/ships (dimension of barges approximately 35 m x 140 m) will be necessary to transport the equipment and material required for the execution of the 2013 Work Plan and execution of the work planned for January to June of 2014.

Material, equipment, fuel and supplies required for construction activities at the Mine Site and the operation of the Mary River facilities will be transported to the Mine Site via the Tote Road during the fall of 2013 and the winter of 2014.

The material, equipment, supplies, buildings and machinery received at Milne Inlet during the sealifts will consist of the following:

#### 3.2.1 Prefabricated Buildings and Fold-away Structures

- Camps complete with dormitories, kitchen facilities, washrooms, laundry facilities;
- Pre-assembled sewage treatment facilities;
- Camp incinerators;
- Emergency services building;
- Power generation equipment with electrical distribution system (several generators ranging from 50 kW to 500 kW);
- Two concrete batch plants;
- Boiler modules:
- Temporary emulsion plant;
- All modular buildings and fold-away structures to be used for offices during the 2013-2014 period. A preliminary list is presented in the table below:

Facility	Quantity	
Maintenance shops	3	
Trade shops (electrical, carpentry, piping, mechanical)	3	
Warehouses	3	
Parking garages	3	
Tire shops	3	
Office complexes	3	
Lunchrooms	3	
Wash cars	13	
Field offices and lunch rooms	10	
Fold-away structures	5	

#### 3.2.2 Heavy Equipment and Rolling Stock

 All heavy equipment and rolling stock required for the construction activities scheduled from July 2013 to July 2014 (next sealift). An overview of the rolling stock is presented in the table below:

Description	Quantity	Description	Quantity
Loader	26	Emulsion Delivery Trucks	3
Grader	7	Loader Snow Blower Attachments	5
Track Dozer	13	Development Rock Drills	2
Excavator	11	Production Rock Drill	2
Haul Trucks	23	Crusher 6000 Ton/Day 6" (Cone Crusher)	2
Service trucks (pick-ups)	27	45ft Van Trailer Generator	2
Skidsteer	5	Hot Box	4
Highway Tractor Truck	4	Frost Fighters	12
Low Boy Trailers	8	Drive on Compactor	8
Boom Truck	3	Walk Behind Compactor	4
80 Ton Mobile RT Crane	2	Plate Compactors	4
200 Ton Track Mount	2	Trash Pumps	8
Crane RT	1	Development Drills	4
Crawler Crane	1	Roll Off Truck	2
Vac Truck - Roll Off	2	Potable Water Tank	1
Potable Water Tanks	2	Water Truck	2
Raw Water Tanks	2	Snow Cat	2
Sewage Vac Tanks	4	Fuel and Lube Truck	4
Garbage Bins	25	Tractor Truck	2
Container Handler	2	Low Boy Float	2
Telehandler	4	Low Boy Drop Deck	2
Ambulance	2	Portable Concrete Batch Truck	2
Fire Truck	2	10 cu.yd Mixer Truck	6
Dewatering Pump	4	100ft Pump Trucks	2
Plow/Sand Truck	4	320000BTU Frost Fighter	20
Buses 8 8kW Light Towers		8kW Light Towers	10
Manlift	6	20kW Whisper Watt Gen Set	7
Scissor Lifts	4	185cfm Air Compressor	2
Maintenance Truck c/w Pick 2		400 Amp Welding Machines	
Fuel Delivery Truck - B-Train	2	Portable Grout Plant (3 off Sea Cans)	
Camp Power-Genset(1250)	10	Ice Profiler	
Boiler Modules	1	4" Ice Auger	
Solution Modules	1	4 ton Propane Bullet c/w Refill Station	
Bob Cat	1	10,000 L Gasoline ISO Container	
Air Compressors	2	Rock Breaker	
Magazines	15	Spray Equipment	

#### 3.2.3 Fuel Delivery

At least two bulk fuel deliveries will occur during the 2013 sealift. At the onset of the shipping season, arctic diesel will be delivered to fill the existing 5 ML storage tank and the newly constructed 5 ML steel tank located at the Milne tank farm. In addition, 1.5 ML of jet A fuel will also be included in the initial fuel delivery.

Throughout the summer months, construction will continue on two additional 10 ML steel tanks (within the confine of the tank farm secondary confinement) for the storage of diesel fuel.