

June 12, 2013

Mr. Brian Aglukark Nunavut Planning Commission P.O. Box 2101 Cambridge Bay, NU, X0B 0C0

Re: Mary River Project – Early Revenue Phase

Dear Mr. Aglukark:

Thank you for your letter of April 13, 2013, which summarized the procedure the Nunavut Planning Commission ("**NPC**") will perform to address the proposed amendment related to Project Certificate No. 0005 (and related amendments to federal permits and licences) as required by Section 11.5.10 of the *Nunavut Land Claims Agreement* ("**NLCA**"). We are writing to provide NPC with the project proposal and other information requested by the NPC in its April 13, 2013 letter required, to enable NPC to make any required conformity determinations relating to the Early Revenue Phase ("**ERP**").

This letter and its attachments have been organized in a fashion to satisfy the NPC requests in their letter dated April 13, 2013 and the requirements of the NLCA. For the reasons set out in this letter, we believe that the ERP is in conformity with the North Baffin Regional Land Use Plan ("**NBRLUP**"), and that such works and activities can be treated as not changing the project proposal(s) that have already been reviewed for conformity under Section 11.5.10 of the NLCA.

A. Overview of NPC Request and Information Provided in this Correspondence

As noted in your letter, the NPC will determine on a timely basis whether the works or activities proposed in the application are relevant to the conformity requirements of the North Baffin Regional Land Use Plan.

In order to assist with NPC to complete its review, Baffinland is providing the enclosed "Early Revenue Phase Project Proposal for Nunavut Planning Commission Conformity Review" (Attachment # 1). In this letter, we provide reference to applications submitted to date as part of the Approved Project (see Part C below).

B. Overview of Early Revenue Phase (ERP)

The essential components of the ERP, those which have not been assessed as part of the Approved Project (Project Certificate No. 005), are as follows:

- Construction and operation of ore handling facilities at Milne Port (stockpile, shiploading);
- Construction of fixed ore loading dock; and,
- Haulage of ore over the Milne Inlet Tote Road.

C. Authorizations related to the Approved Project (Project Certificate No. 005)

The following authorizations, licence or permits are associated with the Approved Project:

- Project Certificate No. 005 Issued by Nunavut Impact Review Board (see link, Attachment #2).
- Type A Water Licence Application FEIS, Volume 3, Appendix 3B (see link, Attachment #2).
- Determination of Harmful Alteration, Disruption or Destruction (HADD) of Freshwater Fish Habitat – FEIS, Volume 10, Appendix 10D-7A (see link, Attachment #2).
- Determination of Harmful Alteration, Disruption or Destruction (HADD) of Marine Fish Habitat – FEIS, Volume 10, Appendix 10D-7B (see link, Attachment #2).
- Land Use Permit N207F0004 (Section of Crown Land along Tote Road) FEIS, Volume 2, Figure 2-2.1, and Table 2-2.3 (see link, Attachment #2).

Baffinland has evaluated each of the above documents in relation to the Proposed ERP, and concluded as follows:

- **Project Certificate No. 005:** As per our correspondence with NIRB and NPC during Spring 2013, Baffinland has identified the requirement to amend Project Certificate No. 005 before it may proceed with the Proposed ERP. If NIRB grants the amendment to the Project Certificate allowing Baffinland to proceed with the ERP, Baffinland will apply for amendments (if required) to the various pending permits, licences and authorizations the company expects to receive for the Approved Project.
- **Type A Water Licence Application** Baffinland anticipates that all activities and facilities proposed for the ERP will be within the scope of the pending Type A Water Licence, as submitted with Appendix 3B of the FEIS. Although it is currently anticipated that amendments to the Type A Water Licence will not be required in order to proceed with the ERP, Baffinland will review the Type A Water Licence once it is issued and apply for amendments, should such amendments be required.

- HADD Authorization for Proposed Ore Dock In addition to the HADD Authorizations already required for the Project, the ERP will require a HADD Authorization for the proposed Milne Port Fixed Ore Dock.
- **AANDC Land Use Permit** The existing Land Use Permit (N207F0004) will be renewed in July 2013.

D. Conformity of Early Revenue Plan with North Baffin Regional Land Use Plan

The scope of the ERP is consistent with two previous conformity determinations for the Mary River Project, which we suggest are relevant in NPCs consideration:

- NIRB File No. 07EN012 On January 22, 2007, NPC provided Baffinland with a positive conformity determination on for its 2007/08 bulk sampling program. This successfully completed program involved the following:
 - o expansion of exploration phase camp facilities at the mine site
 - the establishment of camp facilities at Milne Port
 - o upgrade of the Milne Inlet Tote Road to all-season capability
 - the mining of up to 250,000 tonnes of ore
 - haulage of the ore sample by truck to Milne Port
 - Ore stockpiling and ship loading facilities, and ocean shipment of ore to markets
- NIRB File No. 08MN053 On April 30, 2008, NPC confirmed a positive conformity decision on the Baffinland's Development Proposal for the Mary River Project. The scope of the Project subsequently grew to include a 3 million tonne per year road haulage operation in the Draft Environmental Impact Statement ("EIS"), though this component of the Project was later withdrawn and was not included in the Final EIS.

We believe that that the ERP is in conformity with the NBRLUP and that such works and activities can be treated as not changing the project proposal(s) that have already been reviewed for conformity under Section 11.5.10, for the following reasons:

- The ERP works and activities are a modification of the works and activities outlined in Baffinland's previous project activities that received positive conformity determinations from the NPC; and,
- The ERP uses the existing Milne Inlet Tote Road, which is recognized as a public access easement under Article 21, Part 4 (Section 21.4.1) of the Nunavut Land Claim Agreement; and

E. Request for NPC Determination

We request your confirmation that the works and activities proposed under the ERP will be treated in accordance with paragraph 2 of your April 13 letter, as not outside of the scope of previous conformity determinations under Section 11.5.10 completed for the Mary River Project.

We look forward to NPC completing its conformity determination. To that end, we would like to request that NPC complete its review and issue its conformity determination to Baffinland and to NIRB on or before June 28, 2013, which will support the Nunavut regulatory process and permit the required NIRB processes to proceed in a timely manner.

We would be pleased to provide you with any additional information which you may require in reviewing conformity for the ERP, and otherwise to answer any general inquiries you may have about the Mary River Project. Please do not hesitate to contact me directly at erik.madsen@baffinland.com or (416) 996-5523.

Yours truly,

CC Mode

Erik Madsen, Vice President Sustainable Development, Health, Safety & Environment

CC Ms. Sharon Ehaloak - NPC

Ms. Navarana Beveridge - QIA

Mr. Ryan Barry - NIRB

Ms. Karen Costello - AANDC

Mr. Dale Nicholson - DFO

ATTACHMENT #1

Project Proposal for Early Revenue Phase



MARY RIVER PROJECT Early Revenue Phase Project Proposal for Nunavut Planning Commission Conformity Review

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SECTION 1.0 - OVERVIEW OF PROJECT PROPOSAL

1.1 <u>OVERVIEW</u>

This document provides an overview of the Project Proposal for the proposed Early Revenue Phase (ERP), describing Project development phases, time frames, work required and a description of the associated infrastructure and activities. The overview has been prepared for the Nunavut Planning Commission (NPC) in order to facilitate the conformity review of the proposed ERP prior to the submission of the Addendum to the Final Environmental Impact Statement to the Nunavut Impact Review Board (NIRB).

The ERP includes certain changes to the Mary River Project as it was originally reviewed by the NIRB. Construction of additional facilities required for the ERP will commence once Project Certificate No. 005 is amended (expected in Q1 2014) by the NIRB to permit Baffinland to proceed with the project modifications included in the ERP. It is anticipated that construction of the ERP facilities will be completed by the end of Q1 2015.

For the approved Project (Project Certificate No. 005), all material, equipment and supplies required for the construction of the Mine Site and the northern portion of the railway will be delivered to Milne Port and transported to the Mine Site over the upgraded Tote Road. Therefore, the development of Milne Port (freight dock, laydown areas, expanded camp and sewage treatment facilities, maintenance shops and warehouses) and the upgrade of the Tote Road (limited realignment, replacement of culverts, addition of bridges) are an integral part of the Approved Project and were included in the scope of the Final Environmental Impact Assessment (FEIS) submitted for and approved on December 28, 2012 as Project Certificate No. 005.

The Early Revenue Phase (ERP) introduces the following additional activities that were not assessed in the FEIS of the Approved Project:

- 1. Mine Site
 - a. Loading of ore into trucks; and
 - b. Truck fleet (for haulage of ore).
- 2. Tote Road
 - a. Haulage of ore along the Tote Road.
- 3. Milne Port:
 - a. Ore stockpiling at Milne Port.
- 4. Marine Shipping
 - a. Ore carrier loading at Milne Port;
 - b. Ore carrier shipping volume and timing.

Permanent Project facilities will be located at the Mary River Mine Site, the Milne Port site and Steensby Port. The Mine Site will be connected to Steensby Port by a railway and to Milne Port by the existing Milne Inlet Tote Road (Figure 1-2.1). Marine access and shipping will occur seasonally through Milne Port and Steensby Port during the construction phase and year-round through Steensby Port during operations, but only during open water season to Milne Port.

Based on the iron ore reserves currently defined and under exploration in Deposit No. 1, the Project will operate for about 21 years. The Project Schedule is shown on Figure 1-2.2. Geological conditions suggest

that additional ore may be delineated as exploration continues, potentially extending the life and/or increasing the production rate of the Project. The development of other deposit(s) is conditional on future government approvals.

Site conditions play an important role in the planning and execution of the Project. The Project area experiences cold temperatures in the wintertime and near 24-hour darkness from November to January. Summers bring 24-hour daylight from May to August, with continued cool to cold conditions. Below, for the Nunavut Planning Commission's (NPC) convenience, Key Project Facts are presented in Table 1-2.1, not only for the proposed Early Revenue Phase but also for the Approved Mary River Rail Project. This will allow the NPC to evaluate the additional components that the ERP introduces in the overall context of the approved Project.

Table 1-2.1 Key Project Facts (Approved Project and Early Revenue Phase)

			Ore F	Productio	on and S	hipment							
	Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 +	
Droject Dhace			Аррі	roved Proje	ct Construc	tion Phase							
Project Phase			Early	Revenue Ph	nase			18 Mtpa Pi	oduction Ph	ase			
Ore Movement													
	Ore Mined - Mt		0.5 Mt	2.7 Mt	3.5 Mt	3.5 Mt	3.5 Mt	4.8 Mt	20 Mt	21.5 Mt	21.5 Mt	21.5 Mt	
Mine	Truck Loading Stockpile at Mine		0.2 Mt	0.2 Mt	0.2 Mt	0.2 Mt	0.2 Mt	0.2 Mt					
Project Phase Ore Movement Mine Operation Tote Road Milne Port Railway Steensby Port	Run of Mine	-	-	-	-	-	0.4 Mt	0.4 Mt	0.4 Mt	0.4 Mt	0.4 Mt	0.4 Mt	
	Crushed Ore Stockpile	-	-	-	-	-	-	1.4 Mt	1.4 Mt	1.4 Mt	1.4 Mt	1.4 Mt	
	Waste Rock / Overburden		0.03 Mt	0.5 Mt	0.8 Mt	0.85 Mt	0.85 Mt	3.2 Mt	40Mt	54 Mt	54 Mt	60 Mt	
	Ore transported		0.5 Mt	2.0 Mt	3.5 Mt	3.5 Mt	3.5 Mt	3.5 Mt	3.5 Mt	3.5 Mt	3.5 Mt	3.5 Mt	
	Truck fleet and size	140 t haul trucks (20 tractors with two 70 tonne trailers)											
Tote Road	Number of ore trucks trip per day (average)		11	43	76	76	76	76	76	76	76	76	
	Average ore truck trip per day		22	86	152	152	152	152	152	152	152	152	
	Non ore truck vehicle traffic/day	30	30	30	30	30	30	20	10	10	10	10	
	Shipping season	July 1 st to October 1 st annually; two tug boats will be chartered for a period of 135 days per year											
	Ore carrier type	Panamax, Supramax and Post Panamax at 50,000 DWT to 90,000 DWT											
Milne Port	Ore shipped - Mtpa	-	0.5 Mt	2.0 Mt	3.5 Mt	3.5 Mt	3.5 Mt	3.5 Mt	3.5 Mt	3.5 Mt	3.5 Mt	3.5 Mt	
	Number of sailings		7	30	53	53	53	53	53	53	53	53	
Project Phase Ore Movement Mine Operation Tote Road Milne Port Railway Steensby Port	Ore stockpile - Mt		0.5 Mt	2 Mt	3.5 Mt	3.5 Mt	3.5 Mt	3.5 Mt	3.5 Mt	3.5 Mt	3.5 Mt	3.5 Mt	
	Ore transported	-	-	-	-	-	-	1.3 Mt	16.5 Mt	18 Mt	18 Mt	18 Mt	
	Railway trip/day							1	4	4	4	4	
Railway	Service road traffic vehicle/day	-	-	30	50	50	50	Service roa	d decommis	sioned			
	Ice Road traffic vehicle/day	-	-	50	Ice road n	o longer rec	quired						
	Shipping	Year around s	hipping; 4 Ice N	Nanagemer	nt Vessels a	nchored at S	Steensby Po	ort to enable	winter ship	oing			
	Ore carries type	Ten dedicated	l icebreaker ore	e carriers - 1	160,000 DW	/T to 190,00	0 DWT						
Stoopshy Dort	ore shipped -Mtpa	-	-	-	-	-	-	1.3 Mt	16.5 Mt	18 Mt	18 Mt	18 Mt	
Steensby Port	Number of sailings	-	-	-	-	-	-	9	110	120	120	120	
Project Phase Ore Movement Mine Operation Tote Road Milne Port Railway Steensby Port	Fine ore Stockpile	-	-	-	-	-	1.4 Mt	1.4 Mt	1.4 Mt	1.4 Mt	1.4 Mt	1.4 Mt	
	Coarse ore stockpile	-	-	-	-	-	3.2 Mt	3.2 Mt	3.2 Mt	3.2 Mt	3.2 Mt	3.2 Mt	

Freight and Fuel Delivery														
Year		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 +		
Project Phase			A	pproved Proje	ect Construc	tion Phase								
			Earl	y Revenue Ph	ase		18 Mtpa Produ	uction Phase)					
Freight Deliver	ry to Site													
Milne Port	Vessels	14	10											
	Cargo tonnage (t)	200,000	150,000	165,000	95,000	43,000	46,000							
Steensby Port	Vessels	22 20 7 4 approximately 3 per annum												
Steensby Fort	Cargo tonnage (t)	-	-	206,000	150,000	107,000	80,000	approxima	ately 60,000	per annum				
Fuel Consump	tion – Mtonnes			-										
Milne Port	ERP Construction	12	14.2	2.9										
	ERP Operation		1.9	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3		
Mino Sito	ERP Construction	3.5	8.7											
Willie Site	ERP Operation		0.65	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7		
On Site Fuel S	torage Capacity													
	Arctic diesel - ML	2 x 5ML 2 x 12 ML	x 5ML x 12 ML 2 steel tanks at 5 ML plus 3 steel tanks at 12 ML storage capacity											
Milne Port	Jet-A - ML	1 steel tank at 1.5 ML capacity												
	Marine diesel	Two tanks 100,000L each within tank farm secondary containment												
	Isocontainers (other fuel)	One double wall isocontainer for gasoline; two isocontainers for propane or other fuel.												
	Arctic diesel - ML	4 x 0.5ML isocontainers 3 steel tanks at 5 ML (total storage capacity of 15 ML)												
Mine Site	Jet-A - ML	1 x 50,000L iso	ocontainer	2 steel tanks	at 1.5 ML (total storage capacity of 3 ML)									
Milne Port	Isocontainers (other fuel)	2	2	4	4	4	4	4	4	4	4	4		
	Arctic diesel – ML			15 x 1ML	15 tanks a	t 1ML	4 stool tooks	at 10ML analy						
	(steel tank)	-	-	20ML barge	2 tanks at	40ML	4 SLEEF LATIKS	at 4010L ea	CII					
Steensby Port	Jet-A - ML	-	-	5 x 1ML stee	l tanks									
	Marine diesel	-	-	1 tank at 7.5ML plus 2 tanks at 25 ML						ML				
	Isocontainers (other fuel)			4	4	4	4	4	4	4	4	4		
Quarries	Isocontainers - diesel	8	8	isocontainer	s at various	quarry sites	along railway		No require	ements				
Tote Road & Railway Const.	Isocontainers - diesel	as required	as required	one x 100,0 tunnel constr	00L isocon uction sites	tainer at ea	ach railway c	amp and at	One isoco	ontainer at e	ach refuge s	station		
Water Crossings	Isocontainers - diesel	1	1	isocontainer	s at major b	ridge constr	uction sites		No require	ements				
Fuel Delivery (Open water season – July 1 st to October 1 st	·)												
Milne Port	Fuel tankers	2	2	2	2	2	2	2						
	Diesel (ERP) - ML	35	50	36	36	36	36	36						
	Marine diesel (tugs)		0.2	0.2	0.2	0.2	0.2	0.2						
	Diesel (Const) - ML			15	15	15	15							
	Jet-A - ML	3	6	3	3	3	3	3						
Steensby Port	Fuel tankers	-	-	2	4	4	3	3 to 6 tank	kers per ann	um				
	Arctic diesel - ML			40	35	35	120	160	160	160	160	160		
	Marine diesel - ML	-	-				50	50	50	50	50	50		
	Jet-A - ML	-	-	3	3	3	3	3	3	3	3	3		

			V	Vorkfor	ce and C	amps							
	Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 +	
Project Phase			Appr	oved Proje									
FIOJECTFIIdSE					ERP Produ	ction			18 N	/Itpa Produc	tion Phase		
Estimated Work	force (all Project sites)												
Construction	On-site (Upper range)	600	600										
ERP	Payroll	825	750										
Operation ERP	On-site		210	210	210	210	210	210	210	210	210	210	
	Payroll		420	420	420	420	420	420	420	420	420	420	
Construction	On-site			570	1800	1600	1600	900					
18 MT Phase	Payroll			800	2700	2400	2400	1350					
Operation	On-site						450	950	950	950	950	950	
18 MT Phase	Payroll												
Air Traffic (estin	nated flights per year)	-			-					_	-		
Milne Port	Dash 8/ATR	210		210	210	105	105						
Mine Site	B737 / C130	300	300	550	550	550	550	365	365	365	365	365	
Steensby Port	B737 / C130			185	185	185	185	185	185	185	185	185	
Camp Capacity (persons per camp)												
Milno	Construction	225	225	110	110	110	110	110	Camp is Downsized				
winne	Operation			60	60	60	60	60	60	60	60	60	
	Exploration camp	150	150	150	150	150	150	150	150	150	150	150	
	Construction	400	400	900	900	900	900	900					
Mine Site	ERP Operation			150	150	150	150	60	60	60	60	60	
	Approved project Operation							250	500	500	500	500	
	Mine Site total beds	550	550	1200	1200	1200	1200	1220	710	710	710	710	
	Tent Camp	40	40	40	Tent cam	p decommi	ssioned						
Steensby	Floating camp	-	-	600	600	600	600			Remov	ed		
	Hardwall camp	-	-	600	600	600	600	300	300	300	300	300	
	Mid-rail	-	-	-	200	200	200	Decommis	ssioned				
Pailway	Ravn River	-	-	-	400	400	400	Decommis	sioned				
naliway	S. Cockburn	-	-	-	300	300	300	Decommis	ssioned				
	N. Cockburn	-	-	-	200	200	200	Decommis	sioned				

Water Consumption and Sewage Discharge												
	Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 +
Project Phase			Арр	roved Proje	ect Constru	ction Phase	2					
FIOJECT FIIdSE					ERP Produ	ction			18 N	/Itpa Produc	tion Phase	
Expected Wate	r Consumption – Type A Water	Licence – annu	cence – annual volumes: Camp lake = 240,000 m ³ /year; Philips Creek/32 km Lake =25,000 m ³ /year									
Milne Port	Phillips Creek (summer) km 32 Lake (winter)	30,200	30,200	24,000	24,000	24,000	24,000	24,000	12,000	12,000	12,000	12,000
Mine Site	Camp Lake	58,000	73,000	240,000	240,000	240,000	240,000	240,000	135,000	135,000	135,000	135,000
Steensby Port	ST 347 Lake (3 km Lake	1,500	1,500	155,000	155,000	155,000	155,000	155,000	155,000	155,000	155,000	155,000
	Ravn Camp Lake			53,000	53,000	53,000	53,000	53,000	53,000	53,000	53,000	53,000
Railway	Nivek Lake			29,000	29,000	29,000	29,000	29,000	29,000	29,000	29,000	29,000
Construction	Cockburn Lake			37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000
	Cockburn Lake			41,000	41,000	41,000	41,000	41,000	41,000	41,000	41,000	41,000
Sewage Dischar	ge Volumes – m ³ /day (Authori	zed under Typ	e A Water Lie	ence)								
Milne Port	Generated, m ³ /d	55	55	55	55	55	55	55	55	55	55	55
	Holding pond size	PWSP #1= 57	75 m ³									
Mine Cite	Generated, m ³ /d	36	36	36	36	36	36	36	36	36	36	36
Evoloration	Holding pond size	Three PWSP – total capacity of 9,400 m ³										
Camp	Sheardown Lake Discharge (90	60	60	60	60	60	60	60	60	60	60	60
camp	days)	m³/day	m³/day	m ³ /day	m³/day	m³/day	m³/day	m³/day	m³/day	m³/day	m³/day	m³/day
	Generated, m³/d			315	315	315	315	315	168	168	168	168
Mine Site	Holding pond size	110,000 m ³ -	PWSP sized t	o hold 10 m	nonths of se	ewage efflu	ent		r			
Main Camp	Mary River Discharge	Water Consumption and Second	1,740	1,740	1,740	672	672	672	672			
	(90 day period)	m³/day	m³/day	m²/d	m³/d	m³/d	m³/d	m³/d	m³/d	m³/d	m³/d	m³/d
	Land Based Camp			310	310	310	310	102	102	102	102	102
Steensby Port	Floatel			310	310	310	310	Removed				
	Discharge			Ocean dis	charge of t	reated sew	age effluen	t via outfall			2022 207 ion Phase	
Rayn Camp	Trucked to Mine			120	120	120	120	Camp and	sewage plar	nt decommis	ssioned	
	Holding pond size			48,000	m [°] - 1 yea	r of sewage	effluent	Decommis	sioned & sit	e reclamatio	on	
Mid-Rail Camp	Trucked to Mine			60	60	60	60	Camp and	sewage plar	nt decommis	ssioned	
	Holding pond size			24,000	m [°] - 1 yea	r of sewage	effluent	Decommis	sioned & sit	e reclamatio	on	
N. Cockburn	Trucked to Mine			60	60	60	60	Camp and	sewage plar	nt decommis	ssioned	
	Holding pond size			24,000	m [°] - 1 yea	r of sewage	effluent	Decommis	sioned & sit	e reclamatio	2022 tion Phase 12,000 135,000 155,000 53,000 29,000 37,000 41,000 55 36 60 m³/day 168 672 m³/d 102 ssioned on ssioned on ssioned on ssioned on ssioned on	
S. Cockburn	Trucked to Mine			90	90	90	90	Camp and	sewage plar	nt decommis	ssioned	
e. cochoann	Holding pond size			36,000	m [°] - 1 yeai	r of sewage	effluent	Decommis	sioned & sit	e reclamatio	201 2022 production Phase	

Quantities of Wastes and Explosives												
	Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 +
			Арр	roved Proje								
Project Phase					ERP Produ	ction			18 N	Atpa Produc	tion Phase	
Quantities of	f Waste											
Milne	To Landfill – t/year	596	596									
	To incinerator – t/y	135	135	135	135	135	135					
	Shipped off-site – t/y	150	150	200	300	300	200					
	Hazardous waste – t/y	150	150	255	255	255	255					
Mine Site	To Landfill – t/year	100	100	4,335	4,335	4,335	4,335	1,765	1,765	1,765	1,765	1,765
	To incinerator – t/y	400	400	980	980	980	980	980	980	980	980	980
Steensby	To Landfill – m ³ /year			2,166	2,166	2,166	2,166	650	550	550	550	550
	To incinerator – t/y			490	490	490	490	490	200	200	200	200
	Shipped off-site – t/y							135	135	135	135	135
	Hazardous waste – t/y							150	150	150	150	150
Quantities of	f Explosives											
Mine Site	AN Stored on site											
	Emulsion used											
	Explosive Manufacture	Mobile / por	table Emulsior	n Plant plus	magazines			Permanen	t Emulsion I	Plant		
Steensby	AN Stored on site											
Port	Emulsion Used	Mobile / por	table Emulsior	n Plant								
	Explosive Manufacture											
Power												
Milne	Demand	5300 kW										
	Installed Power	five diesel ge	nerating sets	– four for n	ormal oper	ration and c	one for eme	ergency purp	oses			
Mine	Demand - ERP	5250 kW										
	Installed Power - ERP	five diesel ge	nerating sets	– four for n	ormal oper	ration and c	one for eme	ergency purp	oses			
	Railway Proj Demand			Annual co	nsumption	i = 114,000	MWh					
	Generators			Installed	ower = 15	.8 MW; 5 u	nits at 5.6 N	/W each (2	emergency	standby uni	ts)	
Steensby	Demand			Annual co	nsumption	114,000	MWh					
	Installed Power			Running L	.oad/Install	ed power =	11 MW/22	2MW; 3 unit	s at 5.6 MW	/ each (2 em	ergency standl	oy units)
Other Sites (C	Quarries, etc.)	Mobile gense	et as required	used during	g construct	ion period						



Figure 1-2.1 Location of Project Activities

1.2 SCOPE OF THE EARLY REVENUE PHASE (ERP)

While the Approved Project scope includes all works and/or undertakings required for the construction, operation, modification, maintenance, decommissioning, and abandonment phases of Milne Port, the Tote Road, the Mine Site, the Railway, Steensby Port and marine shipping, the ERP focuses solely on Milne Port, the Tote Road and the Mine Site. Air Traffic and on-going geotechnical exploration at the other Approved Project activities at the sites will occur during the ERP.

1.2.1 Scope of the ERP

All material, equipment and supplies required for the construction of the Mine Site and the northern portion of the railway will be delivered at Milne Port and transported to the Mine Site over the Tote Road. Therefore, the development of Milne Port (freight dock, laydown areas, expanded camp and sewage treatment facilities, maintenance shops and warehouses) and the upgrade of the Tote Road (limited realignment, replacement of culverts, addition of bridges) are an integral part of the Approved Project as well as the ERP and were included in the scope of the Final Environmental Impact Assessment (FEIS) submitted for and approved December 28, 2012 in Project Certificate No. 005.

The ERP introduces the following additional activities or infrastructure that were not assessed in the FEIS of the Approved Project:

- 1. Mine Site
 - a. Loading of ore into trucks;
 - b. Truck fleet and maintenance facilities.
- 2. Tote Road
 - a. Haulage of ore by trucks along the Tote Road.

Note: Ugrades to the Tote Road were assessed as part of the Approved Project. Design details and description of these upgrades will be included in the addendum to the FEIS submission for information purposes as per condition #29 of the Project Certificate.

- 3. Milne Port:
 - a. Ore stockpiling at Milne Port
- 4. Marine Shipping
 - a. Ore carrier loading at Milne Port;
 - b. Ore carrier shipping volume and timing.

1.3 CONSTRUCTION PHASE – ERP AND APPROVED PROJECT

The revised timing for the three main Project phases is summarized as follows:

- Construction Phase (Year 1 through Year 7):
 - ERP construction: Q2 2014 to Q2 2015
 - Approved ERP Project: Q3 2015 to Q2 2019
- An approximate 21-year Operations Phase:
 - ERP operation: Shipping of ore begins in Q3 2015
 - Approved Project: Railway operation and shipping to commence in Q1 2019
- An approximate 3-year Closure Phase and 5 year Post-Closure Monitoring Phase. If closure objectives are not met, post closure would extend beyond five years.

While construction of the ERP infrastructure will require approximately two years, the construction of the remaining portion of the Approved Project infrastructure is expected to take up to five years (longer construction phase to allow for availability of financing), with the Railway being on the critical path. The Railway is necessary for shipment of iron ore to Steensby Port.

The Project workforce on rotation will peak in the second year of construction of the larger Project. For the ERP, peak construction workforce will occur in 2014. Workers hired from Nunavut communities will typically work for two weeks, followed by two weeks off. Other construction workers will likely work four weeks on and two weeks off.

1.3.1 <u>Transition to the Approved Project Execution Phase</u>

As Baffinland noted in early of January 2013, in a correspondence with the NIRB, a decision was made to move the project forward in a phased approach due to the current economic climate. It is Baffinland's intention to obtain any additional permits required to continue construction of the Approved Project as required.

Baffinland is moving forward with the application to amend the Project Certificate to allow for an Early Revenue Phase and recognizes that the ERP scope of work needs to undergo an Environmental Impact Statement (EIS) review process. At this time, Baffinland cannot predict with certainty the length of time that the ERP will continue; however, it remains the goal of the Company to pursue the full scope of the Approved Project, once the global economy has improved.

For the purpose of the EIS, it is assumed that financing for the Approved Project Execution Phase will become available to begin engineering in 2014 and full scale mobilization at all Project sites in 2015. Construction of the Approved Project, which began with site capture activities at Milne Port in 2013, will be completed in 5 years to enable first ore shipment in Q4 2019.

1.3.2 Milne Port – Construction 2013 to 2014

Construction of the Approved Project began with the 2013 Work Plan and is currently underway. The 2013 Work Plan focuses on site capture at Milne Port, along with 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.

The site plan for Milne Port is presented on Figure 1-2.3. Milne Port and the Milne Inlet Tote Road will be a key transportation hub supporting construction of the Mine Site and the north portion of the Railway. Equipment and supplies will be delivered to Milne Port by conventional sealift during the open-water season and then transported overland by trucks to the Mine Site via the Milne Inlet Tote Road.

The existing facilities at Milne Port will play a key logistical support role for receiving sealift materials at Milne Port for both the ERP and the construction of the Approved Project. These facilities include: a personnel camp for 60 people, water supply and treatment facilities, mobile diesel generators, a sewage treatment plant, an incinerator, a 5 ML permanent steel fuel tank, borrow areas, rock quarries, laydown area, airstrip, and temporary bulk sampling ore stockpile area.

Once the Project Certificate is amended (expected in 2014) by the NIRB, in support of ERP construction and operation, Baffinland will proceed with the fixed ore dock construction and the development of the ore stockpile and reclaim area, which are the essential infrastructure required for ore shipment. An ore stockpile

will be constructed at Milne Port to receive ore on a year round basis. Mobile stacking and reclaim equipment will be used except for a fixed reclaim conveyor will be installed from the stockpile to the ship loader. An ore dock will be constructed from sheet piling and a ship loader will be installed to load ore carriers during the open water season.

It is expected that by the Q2 2015, Milne Port will be fully developed and operational for the loading and shipment of ore. It is expected that commissioning activities will constrain iron ore shipments to 2Mt iron ore during the 2015 open water shipping season with 3.5Mtpa shipped during the following seasons.

The infrastructure constructed will satisfy the requirements of the larger Approved Project (staging of construction material for the Mine and Railway development).

1.3.3 <u>Milne Inlet Tote Road – ERP</u>

The Milne Inlet Tote Road was upgraded in 2008 from a winter road to an all-season road adequate for transporting equipment and ore using 45-t trucks. Figure 1-2.4 presents the alignment of the Milne Inlet Tote Road. The approved road upgrade work (Project Certiifcate No.005) will begin in Q4 2013 and carry through during 2014. The upgrade consists of improvements to the road base and reductions of steep grades at certain locations, and, the replacement of culverts and construction of four bridges.

The upgrade to the Tote Road will enable trucking of iron ore from the Mine Site to Milne Port and support transport of materials for construction for the Approved Project. The road haulage will use conventional trucks with 2 trailers as currently operated in other northern mining operations such as the Red Dog Mine in Alaska.

A Roads Management Plan (to be included in Addendum to FEIS in Volume 10) stipulates the rules of the road, including for example: the safe access and use by the public including hunters, limiting travel speed, yielding the right-of-way to wildlife, reporting wildlife observations, travelling in convoys for safety, emergency and spill response procedures, a safety policy addressing discharge of firearms near the road, truck traffic communications, and a community notification and update process.

1.3.4 Mine Site - ERP

For the ERP, the mining area will be developed in an area with a low stripping ratio. An upgraded haul road with appropriate widths, curves and safety features such as runaway lanes will be built connecting the pit to the crusher. Mining equipment will be sized to suit the lower production rate. It should be noted that all activities associated with mining at Deposit 1 are approved under Project Certificate No. 005.

Mobile crushing, screening, stacking and reclaim equipment will be installed at the Mine Site. The facilities can easily be relocated/removed as required. The mining and materials handling system will operate year round.

Additional infrastructure such as a 400 person camp will be constructed to house construction and operation personnel. Maintenance facilities, warehouses, administration buildings as well as waste management facilities that will ultimately be required for the larger project will also be constructed.

As stated above, the ERP operation will be designed, planned, executed and operated in a manner that does not interfere with the Approved Project construction or operation. ERP facilities that interfere with the execution of the larger Approved Project will be replaced, moved or removed.

The airstrip at the Mine Site will be a primary air access point throughout the Project life. The airstrip will be extended from 1,600 m in length to 2,000 m with a graded area consistent with the dimensions. As a key link to the Project and the requirement for year-round accessibility by air, a gravel runway will be constructed to accommodate jet aircraft (Boeing 737 - 200) and L-382 Super Hercules turboprop aircraft.

1.3.4.1 ERP Integration with the Approved Project

Construction at the Mine Site will focus on establishment of infrastructure needed to support mining activities at an increase rate of 21.5 Mtpa (18 Mtpa for the railway and 3.5 Mtpa for road haulage via Milne Port) and the construction of the northern section of the Railway. Existing infrastructure established during the ERP development will be used to the extent possible to minimize land disturbance. Figure 1-2.5 presents the layout of the Mine Site. New facilities will include a permanent accommodation complex and offices, permanent fuel storage, ore handling and stockpiling facilities, temporary explosives magazines and a permanent explosives plant.



Figure 1-2.2 Milne Port Layout

Figure 1-2.3 Milne Inlet Tote Road







1.4 OPERATION PHASE OF THE ERP

Table 1-2.1 presents key facts summary for the Early Revenue Phaset and the transition period to the larger Approved Project.

During the ERP, 3.5Mtpa of ore will be mined, crushed and screened, using mobile crushing equipment at the Mine Site, and then transported north to Milne Port via side-dump tractor trailer combinations. At Milne Port the material will be stacked and then during the open-water season, the material will be loaded onto ships that will transport the ore to market. Figure 2-1 presents a simplified flow diagram for the ERP. It is important to note that the activites up to "truck loading" in Figure 2-1 are approved activities under Project Certificate No. 005. Therefore, activities introduced as part of the ERP include loading of trucks at the Mine Site, transporting the ore along the Tote Road, stockpiling ore at Milne Port, and shipping ore from Milne Port via Milne Inlet.



Figure 2-1 ERP Simplified Flow Diagram

It is expected that the ERP will produce for 5 years on its own, after which time it is expected that production from the Approved Project (18 Mtpa) will start and augment ERP production. The ERP shipping profile is shown in Figure 2-2 in relation to the Approved project.



Figure 2-2 Annual Product Shipped (Mtpa)

1.4.1 Shipping from Milne Port

The current shipping window in Milne Inlet is 90 days during the period July 15 to October 15 although a conservative 70 days is assumed to allow for ship scheduling delays. Depending on vessel availability, Handymax and Panamax vessels (approximately 55,000 to 90,000 DWT) will be used. In order to schedule the vessels in the time period, it will be necessary to contract with one or possibly two ship-owners of sufficient size to allow all ships to be chartered and scheduled. Vessel docking will be assisted by harbour tugs and lines personnel on the temporary floating dock during the construction phase. The shipping route to Milne Port from the North Atlantic Ocean is well established through very deep waters. It extends from Baffin Bay and passes through Eclipse Sound to the head of Milne Port. It is the same shipping route assessed and Approved in Project Certificate No. 005. Figure 1-2.1 presents the shipping route from both Milne Port.

1.5 PRELIMINARY CLOSURE AND POST CLOSURE

Throughout all phases of the Project, Baffinland will plan and conduct operations in a manner designed to return Project sites to a safe and environmentally stable condition. Baffinland will undertake progressive reclamation throughout the mine life. Temporary facilities will be decommissioned and removed as their use ceases. Borrow areas, quarries, temporary roads and other disturbed sites will be stabilized to limit erosion of ground surfaces and rehabilitated once they are no longer required. Environmental and safety monitoring will continue as long as necessary to ensure that closure objectives have been met. The Preliminary Closure Plan was developed in accordance with Aboriginal Affairs and Northern Development Canada

(AANDC) Guidelines for Mine Closure (2007 Guidelines) as well as QIA Closure Guidelines. An interim Abandonment and Closure plan will be submitted with the Addendum to the FEIS prior to the end of June 2013.

ATTACHMENT #2

Electronic Links to Documents Referenced in Part C

Electronic Links to Documents Referenced in Part C

The following authorizations, licence or permits are associated with the Approved Project:

• Project Certificate No. 005 – Issued by Nunavut Impact Review Board:

<u>ftp://ftp.nirb.ca/02-REVIEWS/COMPLETED%20REVIEWS/08MN053-</u> BAFFINLAND%20MARY%20RIVER/2-REVIEW/11-PROJECT%20CERTIFICATE/02-CORRESPONDENCE/</u>

• Type A Water Licence Application – FEIS, Volume 3, Appendix 3B:

ftp://ftp.nirb.ca/02-REVIEWS/COMPLETED%20REVIEWS/08MN053-BAFFINLAND%20MARY%20RIVER/2-REVIEW/08-FINAL%20EIS/FEIS/Vol%2003/Appendices/

 Determination of Harmful Alteration, Disruption or Destruction (HADD) of Freshwater Fish Habitat – FEIS, Volume 10, Appendix 10D-7A:

ftp://ftp.nirb.ca/02-REVIEWS/COMPLETED%20REVIEWS/08MN053-BAFFINLAND%20MARY%20RIVER/2-REVIEW/08-FINAL%20EIS/FEIS/Vol%2007/Appendices/

 Determination of Harmful Alteration, Disruption or Destruction (HADD) of Marine Fish Habitat – FEIS, Volume 10, Appendix 10D-7B:

ftp://ftp.nirb.ca/02-REVIEWS/COMPLETED%20REVIEWS/08MN053-BAFFINLAND%20MARY%20RIVER/2-REVIEW/08-FINAL%20EIS/FEIS/Vol%2007/Appendices/

Land Use Permit N207F0004 (Section of Crown Land along Tote Road) – FEIS, Volume 2, Figure 2-2.1, and Table 2-2.3:

<u>ftp://ftp.nirb.ca/02-REVIEWS/COMPLETED%20REVIEWS/08MN053-</u> BAFFINLAND%20MARY%20RIVER/2-REVIEW/08-FINAL%20EIS/FEIS/Vol%2002/