

NPC Application Form 148420

Application Type:	New				
Project Name:	Mary River Phase 2 Expansion Project				
Proponent Detail					
Proponent Name	Proponent Company Name	Proponent Address	Tell	Fax	Email
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Project Description:	<p>Baffinland Iron Mines Corporation (Baffinland) is a Canadian mining company that operates the Mary River iron ore mine (the Project), located in the Qikiqtani Region of Nunavut on Baffin Island. The Project is authorized to mine up to 22.2 million tonnes per annum (mtpa) of iron ore and to transport up to 18 mtpa of iron ore to market by the Southern Transportation Corridor and Shipping Route and to transport up to 4.2 mtpa of iron ore to market by the Northern Transportation Corridor via the Northern Shipping Route (from Milne Inlet to Baffin Bay) during the open-water season (July to October). Due to the high cost of development combined with depressed conditions, the Project has not been able to proceed with the development of the infrastructure required to support the transport of up to 18 mtpa of iron ore to market by the Southern Transportation Corridor and Shipping Route. Instead, Baffinland has developed and is operating the Early Revenue Phase (ERP) portion of the Project in an effort to build investor and customer confidence in the Project. Baffinland shareholders continue to invest in the Project to fund its working capital requirements, however to establish an economically sustainable operation production must increase to 12 mtpa by the Northern Transportation Corridor via the Northern Shipping Route with a lower cost rail transport to port. The Mary River Phase 2 Expansion Project (Phase 2) was originally submitted to the Nunavut Impact Review Board (NIRB) in October 2014. Due to improvements in the original project proposal based on two (2) years of operational experience and extensive community consultation, Baffinland was directed to re-submit the Proposal to the Nunavut Planning Commission (NPC) and NIRB to allow it to proceed through the environmental assessment process. New infrastructure required will include: Construction and operation of a railway track and ore loading station required to support the northern railway operation; additional primary crushing equipment and a mine truck workshop to support increased production; and expansion of the existing accommodation camp to support the increase of required personnel at the Mine Site. A new rail line approximately 110 km in length and generally following the routing of the existing Tote Road is proposed to be constructed and operated to connect the Mine Site with the Port Site. The rail route would only move away from the Tote Road where required due to terrain and other technical considerations. It is estimated that the cycle time of the rail way will be approximately nine (9) hours and five (5) to six (6) trains would be loaded per day. At the Port Site, a second ore dock to accommodate Cape sized vessels, a second ship loader, railway unloading and maintenance facilities, and additional support infrastructure will need to be developed in addition to an enclosed crushing facility. The increased efficiency and capacity that resulting from the proposed expansion will allow Baffinland to concentrate iron ore shipments during ice free / open water. This strategy was developed based on community feedback regarding concerns over winter shipping. The ore shipping season is proposed to be from July 01 to November 15, but would be adapted annually in consultation with the Pond Inlet Hunters and Trapper Organization (HTO) based on ice conditions and thickness. All efforts will also be made to ship fuel and freight during the open water season. However, Baffinland will be seeking the ability to conduct winter sea lift of freight if required to support on-going operations. Peak shipping months for Phase 2 would be July, August and September which would see an estimated total of 38, 65, and 55, incoming and outgoing trips respectively past Pond Inlet, inclusive of ore carriers, freight and fuel. The updated Phase 2 proposal has been refined based on Baffinland's on-going regulatory, community and stakeholder engagement initiatives. Through these consultations, two (2) primary concerns with the Phase 2 proposal have been identified. Concerns about potential winter shipping and ice breaking, including concerns around the possible effects of this activity on the marine environment (including marine mammals) and on Inuit land use activities and travel routes. Baffinland feels this concern has been sufficiently mitigated with the optimized shipping strategy described above. Concerns about the air emissions and dust generated by the on-going (and potentially increased) use of the Tote Road to transport ore by truck to the Milne Port site, and the possibility of wildlife injury, mortalities or other negative interactions and disturbances. Baffinland feels this concern will be sufficiently mitigated with the proposed development of the rail line which will result in far less air emissions, dust, noise and other disturbances than would be associated with the continued and increased truck traffic along the Tote Road, as well as reduced potential for interactions with wildlife. Additional negative effects of the proposal include potential harm to wildlife, harm to wildlife habitat/environment and potential disruption to community travel routes and traditional land use activities. Baffinland feels these concerns can be mitigated with the optimized shipping schedule previously described, constructing the railway in a manner that facilitates ease of crossing for users and animals, a robust adaptive social and biophysical management program, and clear and comprehensive communication and awareness initiatives with effected communities. Through its early development, the Project has been an important economic driver in Nunavut, creating significant direct employment and business activities throughout its construction and operations phases. Through these direct and spin-off employment and business benefits and associated taxation revenues, the Project has been and remains a</p>
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vital component of the current socioeconomic structure of the area, and has made significant economic contributions at the community, territorial and national scales. With this proposed Phase 2 expansion, Baffinland feels it can maintain and increase these benefits. It is noted, this Project Proposal for the Mary River Phase 2 has been prepared for submission to the Nunavut Planning Commission (NPC) as requirement for Conformity Determination under the Nunavut Planning and Project Assessment Act (NuPPAA). PLEASE NOTE: - The shapefile for the rail center line was not able to be uploaded to the Project Maps tab. As an alternative, it was included in the Project Document tab. - The quantities related to person-days, material, equipment, and waste generation provided in this submission represent the marginal 'peak' difference the Phase 2 expansion will have relative to the existing approved operation. Please see the Project Proposal document that has been uploaded to the NPC Project Proposal website as a separate document for further discussion on this approach.

Project Start Date:	2018-11-01
Project End Date:	2046-12-31
Annual / Seasonal:	
No of Personnel on Site:	615
Estimated No of days on site:	30
No of person days:	18450
Land Uses:	Advanced Mineral Exploration
	Airport
	All-Weather Road Access
	Corridor
	Ice-breaking
	Marine-Based Activities
	Mine Development
	Mineral Exploration
	Permanent Structures
	Pits and quarries
	Scientific Research
	Site Cleanup/Remediation
	Temporary Structures
Transportation and/or Communications Corridor	
Winter Access	

Land Ownership:	
Authorizing Agencies:	Community Government & Services
	Government of Canada - Canadian Wildlife Service
	Government of Canada - Environment & Climate Change Canada
	Government of Canada - Fisheries and Oceans Canada
	Government of Canada - Indigenous and Northern Affairs Canada
	Government of Canada - Industry Canada
	Government of Canada - Natural Resources Canada
	Government of Canada - Parks Canada
	Government of Canada - Transport Canada
	Government of Nunavut - Department of Culture and Heritage
	Government of Nunavut, Community and Government Services
	Government of Nunavut, Department of Economic Development & Transportation
	Government of Nunavut, Department of Environment
	Nunavut Tunngavik Inc.
	Nunavut Impact Review Board
	Nunavut Parks
	Nunavut Water Board
Qikiqtani Inuit Association	

Other Licensing Requirements:	Class A Water License
	Class A Land Use Permit
	Class I Land Use Permit

Equipment			
Equipment Type	Qty	Dimensions	Proposed Use
Haul Truck (e.g. Cat 777), Shovels, Wheel Loader (e.g. CAT 992), Rotary Production Drill, Dozer (e.g. CAT D10)	28	Various	Heavy Mine Equipment
Cone Crusher, Jaw Crusher, Reclaim Conveyor, Stockpile Conveyor, Screens	9	Various	Ore Processing equipment
Ore Locomotives, Ore Cars, Wheel Loader (e.g. CAT 992)	153	Various	Rail Equipment
Articulating Rock Truck (e.g. CAT 740), wheel loader, Shiploader, Reclaim Conveyor, Crushers, Stockpile Conveyor, Screens	16	Various	Port and Ore Handling Equipment
Generators, frost fighters, pickup trucks, heating units, light plants, aircraft	134	Various	Site Services/Support Equipment

Fuel		
Fuel	Containers and Amount	Proposed Use
Diesel	1 x 32000000 Litres = 32000000	Mobile Equipment
Diesel	1 x 28000000 Litres = 28000000	Power Generation
Diesel	1 x 8000000 Litres = 8000000	Building Heating
Aviation fuel	1 x 2700000 Litres = 2700000	Flights

Hazardous materials		
Material	Containers and Amount	Proposed Use
Batteries	28 x 1000 Litres = 28000	Mobile, Mechanical, Electronic Equipment
Hydro Carbon Contaminated Material	65 x 1000 Litres = 65000	Resulting from maintenance and spills
Waste Oil	389 x 1000 Litres = 389000	From mechanical equipment maintenace
Waste Fuel	29 x 1000 Litres = 29000	Contaminated fuel
Waste Grease	10 x 1000 Litres = 10000	From kitchen
Waste Hazardous Liquids	126 x 1000 Litres = 126000	Misc hazardous liquid waste (cleaning supplies, coolant, etc)
Waste Aerosol Canisters	1 x 1000 Litres = 1000	From domestic and operational sources
Contaminated Containers/Solids	100 x 1000 Litres = 100000	Resulting for packing or contact with other haz materials
Misc Hazardous Materials	79 x 1000 Litres = 79000	Does not fit other catergories

Environmental Impacts:	Potential negative environmental impacts of the proposal include potential harm to wildlife, harm to wildlife habitat/environment and potential disruption to community travel routes and traditional land use activities. Baffinland feels these concerns can be mitigated with the optimized shipping schedule, constructing the railway in a manner that facilitates ease of crossing for users and animals, a robust adaptive social and biophysical management program, and clear and comprehensive communication and awareness initiatives with effected communities. See the NPC Project Proposal Report uploaded to the NPC website for further discussion on mitigation measures.
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Waste				
Activity	Waste Type	Quantity	Disposal Method	Treatment Method
Mine Development	Combustible wastes	1072 t/year	Landfill	Incineration prior to landfill of ash
Mine Development	Hazardous waste	827 t/year	Off-site at Licenced Facility	Packaging, storage and manifesting
Mine Development	Non-Combustible wastes	186 t/year	Landfill	Compaction prior to landfill

