

APPENDIX 2C

EFFECTS INTERACTION MATRICES

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

[illegible]

Impact Ratings:
0 = no interaction
1 = minor interaction post mitigation, addressed as a subject of note and not evaluated further in the EIS
2 = interaction to be considered further in the EIS

TABLE 2C-2
BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT
EFFECTS INTERACTION MATRIX - MILNE INLET TOTE ROAD

			KEY INDICATORS																							
			ATMOSPHERIC																							
			TERRESTRIAL																							
			FRESHWATER AQUATIC LIFE AND HABITAT																							
			MARINE																							
			SOCIO-ECONOMIC																							
			Cultural resources (archaeological sites)																							

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TABLE 2C-3

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

EFFECTS INTERACTION MATRIX - MINE SITE

														KEY INDICATORS		ATMOSPHERIC					TERRESTRIAL															FRESHWATER AQUATIC LIFE AND HABITAT					MARINE														SOCIO-ECONOMIC																									
														Air quality		Noise		Vibration					Sensitive Landforms		Soil		Vegetation health		Plants important to Inuit, where they occur		Biodiversity		Peregrine falcon		Red-throated loon		Elder		Snow geese		Caribou					Hydrology		Water and sediment quality		Freshwater fish and fish habitat				Physical oceanography		Chemical oceanography		Sea ice		Port site marine habitat		Coastal fish communities		Ringed seal		Bowhead whale		Beluga whale		Narwhal		Walrus		Polar bear		Marine birds				Cultural resources (archaeological sites)
Mine Site - Facility or Activity																																																																																
Construction	Open pit mining: stripping, excavation, drilling, blasting, heavy machinery.	2	2	1				0	2	2	2	2	2	2	1	1	1	1	2		2	2	2																0																																									
	Ore crushing: grading, construction of facility.	2	2	1				0	2	2	2	2	2	1	1	1	1	1		0	2	0																	0																																									
	Waste rock management facilities: earth moving, heavy machinery use, grading.	2	2	1				0	2	2	2	2	2	1	1	1	1	1		2	2	2																	0																																									
	Laydown areas (temporary): cleared land for storage of construction materials.	1	1	0				1	2	2	2	2	2	1	1	1	1	1		1	1	1																	0																																									
	Camp and related facilities (permanent): construction of Project buildings.	1	1	1				0	2	2	2	2	2	1	1	1	1	1	2		2	2	1																1																																									
	Aggregate sources/ borrow sites (permanent): drilling, blasting, extraction, hauling.	2	2	2				2	2	2	2	2	2	1	1	1	1	1	2		1	2	1																0																																									
	Airstrip (permanent): land clearing,, blasting, installation of lights.	1	1	1				1	2	2	2	2	2	1	1	1	1	2	2		1	1	1																0																																									
	Communications systems (permanent): installation of towers.	1	1	0				1	2	2	1	2	1	1	1	1	1	1		0	1	1																	0																																									
	Fuel storage and distribution (permanent): construction of bermed facility, operation of trucks.	1	1	0				2	2	1	1	1	1	1	1	1	1	1	0		0	2	1																0																																									
	Concrete production (temporary): facility, production, waste.	1	1	0				0	2	1	1	1	0	1	1	1	1	0		2	2	2																	0																																									
	Equipment and vehicle use: heavy machinery and trucks.	2	2	1				0	2	2	2	2	2	1	1	1	1	1	2		0	1	0																1																																									
	Vegetation clearing/ stripping: for footprint of all facilities and roads.	1	1	0				1	2	2	2	2	2	1	2	2	2	2		1	1	1																	1																																									
	Explosives storage and use (temporary): construction of a temporary facility, blasting.	2	2	2				1	2	2	2	2	0	0	0	0	0	0		0	2	2																	0																																									
	Earth moving: excavation, drilling, grading, trenching, backfilling.	2	2	2				2	2	2	2	2	1	2	2	2	2	1		1	1	1																	0																																									
	Spills and emergency management	1	1	0				1	1	1	1	1	0	1	1	1	1	0		0	2	1																	0-2																																									
	Waste management: garbage and sewage waste facilities.	2	1	1				2	2	2	2	2	0	0	0	0	0	0		1	2	2																	0																																									
	Hazardous materials handling and storage	1	1	0				1	1	1	1	1	0	0	0	0	0	0		0	2	0																	0																																									
	Construction of roads: land clearing and road installation, water body crossings.	2	2	1				2	2	2	2	2	1	2	2	2	2	2		2	2	2																	0																																									
	Power generation and distribution: installation of surface structures, land clearing.	2	2	1				2	2	2	2	2	1	1	1	1	1	1		0	1	0																	0																																									
	Water use and management: ditching, ponding, berms, snow clearing and stockpiling.	1	1	0				2	2	2	2	2	0	1	1	1	1	1		2	2	2																	0																																									
																																							0																																									
Operation	Camp and related facilities.	2	2	0				1	0	1	0	0	1	2	2	2	2	2		2	2	1																	0																																									
	Open pit mining.	2	2	0				1	1	1	0	1	2	1	1	1	1	2		2	2	2																	0																																									
	Ore stockpiles and transport.	2	2	0				2	2	2	1	0	1	1	1	1	1	1		2	2	2																	0																																									
	Ore crushing.	2	2	0				0	2	2	1	1	1	1	1	1	1	1		0	2	2																	0																																									
	Airstrip.	1	1	0				0	0	1	0	0	1	1	1	1	2	2		0	1	0																	0																																									
	Communications systems.	0	0	0				0	0	0	0	0	1	1	1	1	1	1		0	1	0																	0																																									
	Fuel storage and distribution.	0	0	0				0	0	0	0	0	1	1	1	1	1	0		0	2	0																	0																																									
	Equipment, vehicle and aircraft use.	2	2	0				1	0	1	0	0	1	1	1	1	1	2		0	1	0																	0																																									
	Barge and ship traffic.	2	2	0				0	0	0	0	0	0	0	0	0	0	1		0	0	0																	0																																									
	Waste and wastewater management.	2	1	0				0	2	1	0	0	0	0	0	0	0	0		2	2	2																	0																																									
	Spills and emergency management.	0	0	0				0	1	1	0	1	0	1	1	1	1	0		0	2	0																	0																																									
	Hazardous materials handling and storage.	1	1	0				0	1	1	1	1	0	0	0	0	0	0		0	2	0																	0																																									
	Road usage.	2	2	1				1	1	1	1	1	1	1	1	1	1	2		0	1	0																	0																																									
	Power generation and distribution.	2	2	0				0	0	0	0	0	1	1	1	1	1	0		0	1	0																	0																																									
	Water use and management including snow management and stockpiling.	1	1	0				1	1	1	0	1	0	0	0	0	0	1		1	2	2																	0																																									
	Decommissioning																																																																															
Mine site facilities: including open pit closure, waste rock storage facility restoration, dismantling and removal of infrastructure, drainage restoration, backfilling/plugging, waste management, ground restoration and revegetation.		2	2	1				2	1	1	1	1	1	1	2	2	2	1		1	1	1																	1																																									

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TABLE 2C-4

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

EFFECTS INTERACTION MATRIX - RAILWAY

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TABLE 2C-5
BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT
EFFECTS INTERACTION MATRIX - STEENSBY PORT

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13-Dec-10

TABLE 2C-7

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

INTERACTION MATRIX - SOCIO-ECONOMIC COMPONENTS

Project Component	SOCIO-ECONOMIC	Population Demographics	Education & Training	Livelihood and Employment	Economic development & self-reliance	Human Health & Well-Being	Community Infrastructure & Public Service	Cultural Resources (archaeology)	Resources and Land Use	Cultural Well-being	Contracting & business opportunities	Benefits, Royalty & Taxation	Governance & Leadership
Jobs													
Employment		2	2	2	2	2	2	0	2	1	1	0	0
Payment of wages and salary		1	2	2	2	2	1	0	2	1	2	0	0
Training													
Orientation and training		0	2	0	2	1	1	0	0	1	0	0	0
Procurement													
Procurement of goods and services from RSA/LSA		1	0	0	2	0	0	0	0	1	2	0	0
Project Construction and Operations													
Milne Port		0	0	0	0	0	0	2	2	0	0	0	0
Milne Inlet Tote Road		0	0	0	0	0	1	2	2	0	0	0	0
Mine Site		0	0	0	0	0	0	2	2	0	0	0	0
Railway		0	0	0	0	0	0	2	2	0	0	0	0
Steensby Port		0	0	0	0	0	0	2	2	0	0	0	0
Shipping		0	0	0	1	0	0	2	2	0	0	0	0
Temporary closure		0	0	1	1	0	0	1	1	1	0	0	0
Final closure		0	0	1	1	0	0	2	2	0	0	0	0
Payment of taxes and royalties													
Payments to government		1	0	0	2	0	1	0	0	0	0	2	1
Payments to private organizations (NTI, QIA)		1	0	0	2	0	0	0	0	0	0	1	0

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13-Dec-10

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