Table 1 Summary of Nunavik Nickel Project mitigation measures.

Component Affected	Project Phase	Source of Impact	Description of Impact	Source[1]	Mitigation Measures	Significance of Residual Impact	Follow-up
Air quality	Construction	Road traffic, use of generators, equipment traffic and soil stripping	Increased airborne dust and exhaust emissions	EA: p. 307	***General:*** **AIR1**: Vehicles, to the extent possible, shall not be left running when not in use. **AIR2**: Dust reducers (calcium chloride or water) shall be sprayed on certain areas in dry, windy weather. **AIR3**: Machinery used shall comply with Environment Canada emission standards.	Minor	General monitoring and follow-up during construction
	Operation	Road traffic, equipment traffic, mine pits, mineral processing plant and concentrate transshipment at Deception Bay Tailings and waste rock storage site Producing power with generators, incinerating wastes and blasting	Increased airborne dust Airborne tailings Greenhouse gas and pollutant emissions	EA: p. 309	***General:*** **AIR2**: Dust reducers (calcium chloride or water) shall be sprayed on certain areas around the industrial complex in dry, windy weather. **AIR4**: Crushers and grinders shall be equipped with dust collectors leading to a dust extractor. **AIR5**: Generators used shall have low contaminant emissions. **AIR6**: Prior and regular inspection of machinery shall be performed to ensure that it is in good condition and working properly. ***Specific:*** **AIR7**: Expo mine tailings shall be covered progressively. **AIR8**: Dikes shall be built on three sides of the tailings pile to shelter tailings from wind, and waste rock shall be piled on top of the tailings once at their maximum height. **AIR9**: Conveyors used shall be enclosed. **AIR10**: The chute for loading concentrates into the bulk-ore carrier hold shall be canvas-covered.	Minor	Monitoring of dust emissions (EA: p. 532); Monitoring and control of asbestos fibres inside the crushing and grinding unit (EA: p. 532–533)
Soil	Construction	Road traffic, equipment traffic and fuel depots Soil stripping and borrow pit operation	Risk of soil contamination Loss of soil usable for other purposes	EA: p. 320–321	***General:*** **SOL1**: Prior and regular inspection of machinery shall be performed to ensure that it is in good condition and working properly (not leaking hydrocarbons). **SOL2**: An emergency kit for recovering petroleum products and hazardous materials shall be readily accessible at all times, construction site machinery shall have absorbent material in order to respond quickly, and polluted soil and wastes shall be disposed of in accordance with applicable legislation and regulations. **SOL3**: Non-acid-generating waste rock shall be used as granular material during the operational phase in order to minimize encroachment upon eskers. ***Specific:*** **SOL4**: Soil stripped and material excavated in building port land facilities shall be largely reused to build the wharf pier, reducing the use of borrow pit material.	Minor	General monitoring and follow-up during construction
	Operation	Transport of ore and concentrate, tailings and waste rock storage, and concentrate handling Industrial complex and access roads Road traffic, equipment traffic, fuel depot and waste incineration Presence of four open-pit mines	Localized increase in metal concentrations on the soil surface Risk of soil slump Risk of soil contamination with hydrocarbons Environmental liability that may affect long-term soil use	EA: p. 323	***General:*** **SOL5**: To prevent subsidence due to the soil heating, major buildings shall rest on piles and lighter buildings shall be on ventilated foundations. **SOL6**: Metal concentrates shall be handled outdoors within enclosures. **SOL7**: Tailings water content shall be kept around 27% and tailings shall be pumped to minimize spreading to the environment. ***Specific:*** **SOL8**: Dikes shall be built on three sides of the tailings pile to shelter tailings from wind, and waste rock shall be piled on top of the tailings once at their maximum height. **SOL9**: The final cover shall include an impervious membrane and an erosion protection layer. **SOL10**: Measures shall be taken when building major civil structures to prevent permafrost from thawing.	Moderate	Monitoring of dust emissions (EA: p. 532)

Table 1 (cont.) Summary of Nunavik Nickel Project mitigation measures.

Component Affected	Project Phase	Source of Impact	Description of Impact	Source[1]	Mitigation Measures	Significance of Residual Impact	Follow-up
Hydraulic and sediment regimes	Construction	Access roads, berm-bridge and port infrastructure Laying culverts, building the berm-bridge and building port infrastructure	Change in flow pattern during construction Change in sediment regime	EA: p. 326	***General:*** **RHS1**: Culverts shall be laid during the summer low-flow period (July to September). **RHS2**: Drainage ditches along the planned road shall stop a few metres above the natural high-water level of streams crossed. ***Specific:*** **RHS4**: A geomembrane shall be installed downstream of crossings and around work areas in order to catch particles that are stirred up. **RHS5**: A containment curtain shall be installed in the water if granular material is taken less than 75 m from a lake. **RHS6**: Road banks at stream crossings shall be covered with a geomembrane and riprap.	Minor	General monitoring and follow-up during construction
				Addendum No. 2: p. 22	***Specific:*** **RHS3**: A sedimentation pond shall be built at the end of the roadside ditch on the left (west) bank of the Puvirnituq berm-bridge.		
	Operation	Berm-bridge, reservoir, roads, mine pits, waste rock piles, tailings storage site and port infrastructure Berm-bridge, reservoir, bridge, roads and port infrastructure	Change in surface runoff pattern Possible increase in erosion and sediment transport in streams	EA: p. 330–331	***General:*** **RHS8**: Stones removed during grading earthwork shall be reused to stabilize banks and hollows. **RHS9**: Resuspension of material shall be minimized when adding or removing material in water. **RHS10**: Earth removed and fill shall be stored outside the buffer strip. **RHS2**: Drainage ditches along the planned road shall stop a few metres above the natural high-water level of streams crossed. **RHS11**: Culverts shall be large enough to not significantly reduce the flow cross-section at stream crossings. **RHS14**: A drainage system shall be built on the port infrastructure site. ***Specific:*** **RHS6**: Road banks at stream crossings shall be covered with a geomembrane and riprap. **RHS13**: During earthwork on steep slopes, the bottom of ditches shall be progressively stabilized with a cover of well-drained granular material and riprap.	Minor	Monitoring of the stability of culverts and the free circulation of fish (EA: p. 533–534)
				Addendum No. 2: p. 21	***Specific:*** **RHS12**: Adequate instream flow shall be maintained in the Puvirnituq River between June and September for the fish pass to work properly. **RHS7**: A 1.1-m^3/s instream flow shall be maintained in spring when filling the reservoir upstream of the berm-bridge.		
Thermal and ice regimes	Construction	Shipping in Deception Bay	Change in the ice cover from ship passage	EA: p. 336	***Specific:*** **RTG1**: Shipping in Deception Bay shall be avoided during the break-up period from mid-March to mid-June (period of seal pupping and increased hunting by Inuits).	Very minor	General monitoring and follow-up during construction
				Navigation: p. 35, 37–38, 42	***Specific:*** **RTG2**: Ships shall not travel at speeds exceeding 7 knots in Deception Bay.		
	Operation	Reservoir Shipping in Deception Bay	Change in thermal regime Change in the ice cover from ship passage	EA: p. 338	***Specific:*** **RTG1**: Shipping in Deception Bay shall be avoided during the break-up period from mid-March to mid-June (period of seal pupping and increased hunting by Inuits).	Minor	Monitoring of shipping in Deception Bay (Navigation: p. 61)
				Navigation: p. 35–39, 42–43, 61	***Specific:*** **RTG2**: Ships shall not travel at speeds exceeding 7 knots in Deception Bay. **RTG3**: Only two trips shall be made during the ice period unless agreements are negotiated with the community of Salluit. **RTG4**: Ships shall always take the same route in Deception Bay, i.e., the Xstrata shipping route, in order to minimize the impact on pack ice. **RTG5**: Ships shall travel along an S-shaped route in Deception Bay in winter to fragment the ice less.		

Table 1 (cont.) Summary of Nunavik Nickel Project mitigation measures.

Component Affected	Project Phase	Source of Impact	Description of Impact	Source[1]	Mitigation Measures	Significance of Residual Impact	Follow-up
Water and sediment quality	Construction	Exploration work	Risk of calcium chloride contamination of water during drilling	EA: p. 340–342	***General:*** **QES1**: Precautions shall be taken to avoid spills near boreholes and to recover any residual chemicals should a spill still occur. **QES2**: Inspections shall be performed to ensure that land and sea machinery (clamshell and barge), as well as temporary tanks are in good condition. **QES3**: Any machinery that must cross a stream outside the winter period shall be inspected and cleaned. **QES4**: Heavy machinery shall only be used within the road right-of-way and borrow pit access roads. **QES5**: Excavated material shall be disposed of in a way that minimizes the spread of suspended solids. **QES6**: Stones removed during grading earthwork shall be reused to stabilize banks and hollows. **QES7**: Drainage ditches along the planned road shall stop a few metres above the natural high-water level of streams crossed. **QES8**: Machinery parking, washing and maintenance areas shall be at least 60 m from any stream, and machinery shall be refuelled under constant supervision at least 30 m from any stream. **QES9**: Culverts shall be laid during the summer low-flow period (July to September). **QES10**: A clamshell dredge shall be used to reduce the proportion of sediment released during dredging. **QES11**: Clay shall be handled with care during dredging operations to minimize liquefaction. **QES12**: The clamshell shall be raised and lowered at speeds of less than 0.6 m/s. **QES13**: The imperviousness of hopper barge compartments shall be monitored during dredging operations. **QES14**: The hopper barge shall be filled to only 90% of its capacity to reduce the risk of any overflow. **QES15**: The hopper barge shall be monitored for smooth operation during dredging. ***Specific:*** **QES16**: A geomembrane shall be installed downstream of crossings and around work areas in order to catch particles that are stirred up. **QES17**: Road banks at stream crossings shall be covered with a geomembrane and riprap. **QES18**: A containment curtain shall be installed in the water if granular material is taken less than 75 m from a lake. **QES33**: A 3-m strip shall be kept intact between the drainage ditches and the bank of the highly productive stream next to the Mequillon waste rock pile.	Minor	General monitoring and follow-up during construction
		Berm-bridge, roads, bridge and soil stripping	Temporary deterioration of water quality				
		Road traffic, equipment traffic and fuel depots	Risk of water and sediment contamination with hydrocarbons				
		Dredging and backfilling for the wharf, and disposal of material dredged offshore	Temporary deterioration of water and sediment quality in the marine environment	CEAA: MPO27	***Specific:*** **QES32**: A containment curtain shall be installed in Deception Bay around the wharf during construction to control the spreading of suspended solids.		

Table 1 (cont.) Summary of Nunavik Nickel Project mitigation measures.

Component Affected	Project Phase	Source of Impact	Description of Impact	Source[1]	Mitigation Measures	Significance of Residual Impact	Follow-up
Water and sediment quality (cont.)	Operation	Road traffic, equipment traffic, fuel depots and fuel transshipment	Risk of water and sediment contamination with hydrocarbons	EA: p. 345–347	***General:*** **QES19**: The top of mine tailings and waste rock piles shall be kept at a 1% to 3% gradient to minimize infiltration. **QES20**: Water in the sedimentation ponds downgradient of the waste rock piles at the Ivakkak, Mequillon and Mesamax mines, and Expo industrial complex process water shall be treated by adding lime and flocculants before entering the final effluent. **QES21**: Solids shall be removed from domestic sewage using a mobile biodisc treatment unit and the waste water shall be disinfected using ultraviolet treatment. **QES22**: Temporary ore storage sites shall rest on a compacted gravel base surrounded by a collecting ditch to channel drainage water to the sedimentation pond, from which it shall be pumped into the process water tank. **QES23**: The kitchen shall be equipped with oil and grease traps. **QES24**: Only phosphate-free soaps and detergents shall be used. **QES25**: Special care shall be taken to avoid spilling ammonium nitrate beside blast holes when loading them, an operation always done using equipment to inject the explosives directly into the blast holes. **QES26**: Abrasives and de-icing chemicals shall only be spread on dangerous locations or during ice-storms. **QES7**: Drainage ditches along the planned road shall stop a few metres above the natural high-water level of streams crossed. **QES2**: Prior and regular inspections of machinery and tanks shall be performed. **QES27**: Fuel tanks shall be surrounded by a berm high enough to contain a spill equal to the largest capacity tank plus 10%. **QES31**: Fuel transshipment facilities shall be equipped with automatic valves detecting fuel leaks and off-shore hydrocarbon recovery gear shall be available at all times. ***Specific:*** **QES28**: Acid-generating waste rock (Mequillon, Expo and Mesamax) shall be covered with neutral granular material and an impervious membrane. **QES29**: Geomembranes shall be placed beneath mine tailings cells, on dike walls and on the top of tailings and waste rock piles. **QES17**: Road banks at stream crossings shall be covered with a geomembrane and riprap. **QES30**: During earthwork on steep slopes, the bottom of ditches shall be progressively stabilized with a cover of well-drained granular material and riprap.	Minor	Monitoring of final effluent and receiving water quality (EA: p. 527–529); Sediment quality monitoring (EA: p. 531)
		Tailings storage site, waste rock piles, pit water and mine pits	Possible deterioration of water and sediment quality downstream of the mine drainage and final effluent outfalls during operation				
		Presence of roads and their maintenance	Possible increase in suspended solids and chlorides downstream of crossing points				
		Plane-de-icing during winter	Possible addition of glycol to surface water				
		Tailings and waste rock storage	Possible deterioration of water and sediment quality after mine rehabilitation				
Vegetation	Construction and operation	Presence of mine and port facilities	Loss of terrestrial and wetland habitats	EA: p. 372–372	***General:*** **VEG1**: Machinery shall not circulate outside work area boundaries (unless otherwise authorized) and a fence shall be put up around the protection perimeter. **VEG2**: Habitats next to jobsites shall be protected, particularly close to stream banks.	Minor	General monitoring and follow-up during construction
		Presence of mine and port facilities	Potential loss of special-status plant species or species considered rare.				

Table 1 (cont.) Summary of Nunavik Nickel Project mitigation measures.

Component Affected	Project Phase	Source of Impact	Description of Impact	Source[1]	Mitigation Measures	Significance of Residual Impact	Follow-up
Aquatic wildlife and sea mammals	Construction	Construction in or near water (culvert, berm-bridge, bridge, wharf, etc.) Berm-bridge construction Shipping, dredging and disposal of dredged material at sea to build the wharf	Avoidance by fish of areas around work in water Temporary loss of aquatic habitat Temporary disturbance of aquatic habitat	EA: p. 376–377, 398–399 Navigation: p. 35–37, 42, 61 CEAA2	***General:*** **FAQ1**: Culverts shall be laid during the summer low-flow period (July to September). **FAQ2**: Vehicle and construction machinery traffic shall be avoided within 20 m of a perennial stream or within 5 m of an intermittent stream and, if such traffic is unavoidable, any water flowing into ruts shall be diverted to an area of vegetation located at least 20 m from a stream. **FAQ3**: The berm-bridge shall be built in winter or in the summer low-water period. **FAQ4**: Blasting on and near the shores of Deception Bay shall comply with the limits set out by Wright and Hopky (1998), taking appropriate measures to limit to 100 kPa the intensity of shock waves in the aquatic environment. **FAQ5**: A clamshell dredge shall be used to reduce the proportion of sediment released during dredging. **FAQ6**: Clay shall be handled with care during dredging operations to minimize liquefaction. **FAQ7**: The clamshell shall be raised and lowered at speeds of less than 0.6 m/s. **FAQ8**: The imperviousness of hopper barge compartments shall be monitored during dredging operations. **FAQ9**: The hopper barge shall be filled to only 90% of its capacity to reduce the risk of any overflow. **FAQ10**: The hopper barge shall be monitored for smooth operation. **FAQ55**: For all DFO-specified priority stream crossings, Canadian Royalties undertakes to maintain the free movement of fish to either side of the road. To do so, the bottom culvert shall be set at least 20 cm into the streambed, slope at least 0.5% and maintain a minimum depth of 20 cm provided flow is sufficient to so allow (CEAA2) ***Specific:*** **FAQ11**: A 3-m strip shall be kept intact between the drainage ditches and the bank of the highly productive stream next to the Mequillon waste rock pile. **FAQ47**: Shipping in Deception Bay shall be avoided during the break-up period from mid-March to mid-June (period of seal pupping and increased hunting by Inuits) **FAQ48**: All dredging operations shall be interrupted if a cetacean is seen within 200 m of a dredge site, disposal site or barge. **FAQ50**: Ships shall not travel at speeds exceeding 7 knots in Deception Bay. **FAQ56**: To protect the beluga, no drilling, blasting or pile driving will be done from June 20 to July 15. Pile driving would be possible from July 16 to August 20. Canadian Royalties undertakes to comply with these restriction periods for any blasting or pile-driving work, and to keep DFO informed (CEAA2) **FAQ57**: A competent observer shall be hired to watch for sea mammals in Deception Bay if offshore blasting work is required. The observer shall be dedicated to that sole task and shall be present at all times during blasting work. Canadian Royalties undertakes to submit a sea mammal monitoring procedure at least 90 days prior to the start of drilling, blasting or pile-driving operations (CEAA2) **FAQ58**: If overpressure in the aquatic environment risks exceeding 100 kPa during blasting, the following information shall be submitted to DFO: scheduled blasting dates, theoretical lethal range, blasting operation characteristics, potential impacts on fish habitat, mitigation measures, residual impacts and an emergency plan (CEAA2)	Minor	General monitoring and follow-up during construction; Monitoring of shipping in Deception Bay (Navigation: p. 61)

Table 1 (cont.) Summary of Nunavik Nickel Project mitigation measures.

Component Affected	Project Phase	Source of Impact	Description of Impact	Source[1]	Mitigation Measures	Significance of Residual Impact	Follow-up
Aquatic wildlife and sea mammals (cont.)	Construction (cont.)	Building of temporary structures Use of machinery Site restoration	Temporary loss of aquatic habitat Temporary disturbance of aquatic habitat Temporary disturbance of aquatic habitat	CEAA: MPO42 CEAA2	***General:*** **FAQ20**: The free movement of fish shall be ensured at all times when a stream is temporarily diverted. **FAQ21**: The diversion channel and its banks shall be stabilized using riprap or a geomembrane. **FAQ22**: Clean granular material shall be used for cofferdams (imperviousness preferably being achieved using non-granular material). **FAQ23**: Temporary structures shall be stabilized using a geomembrane or riprap. **FAQ24**: Fine particle transport shall be prevented in the aquatic environment beyond the immediate work area. **FAQ25**: Areas disturbed by earthwork (e.g., slopes and banks) shall be stabilized progressively as work is completed. **FAQ26**: Surplus material shall be disposed of at a specially designated site. **FAQ27**: Vehicle maintenance and refuelling, and hydrocarbon storage and handling, shall be at a distance of more than 30 m from the natural high-water level. **FAQ28**: Machinery shall be prohibited from fording streams. **FAQ29**: Vehicle traffic shall be restricted to designated and clearly identified roadways. **FAQ30**: Hydrocarbon-absorbing floating booms shall be installed downstream of work in streams, as well as in lakes and areas with low flow. **FAQ31**: Machinery shall be moved away from streams as soon as possible. **FAQ32**: Machinery used shall be clean and in good condition. **FAQ33**: Waste oil from machinery shall be taken to a specially designated site. **FAQ34**: Emergency gear shall be on hand in case of spills and workers shall know how to use it. **FAQ35**: The diversion channel shall be backfilled and restored to its original condition. **FAQ36**: Areas of streams affected by construction shall be restored to their initial characteristics (substrate, width, depth and vegetation). **FAQ53**: Berm-bridge cofferdams shall be built in a way that does not reduce Puvirnituq River flow cross-section by more than half and no work in water shall be carried out from September 1 to mid-October in order to protect Arctic char and lake trout spawning (CEAA2)		
		Blasting near Deception Bay	Disturbance of and potential injury to sea mammals	CEAA: MPO18	***Specific:*** **FAQ39**: Blasting shall only be performed at low tide. **FAQ40**: A sea mammal exclusion zone shall extend up to 1 km from the work area and blasting shall only be performed after having confirmed that no sea mammals are present in that zone. **FAQ41**: An observer shall be posted to watch for sea mammals in the exclusion zone. **FAQ42**: Care shall be taken not to frighten sea mammals that may be found in the exclusion zone. **FAQ43**: Buoys shall be used to mark out the exclusion zone.	Minor	General monitoring and follow-up during construction; Monitoring of shipping in Deception Bay (Navigation: p. 61)
		Pile driving and drilling in Deception Bay	Disturbance of sea mammals	CEAA: MPO30	***Specific:*** **FAQ44**: Work related to pile driving and drilling shall only be performed when no sea mammals are within 600 m. **FAQ45**: An observer shall be posted during pile driving and drilling to ensure that no sea mammals are within 600 m. **FAQ46**: The buoys used to mark out the exclusion zone (FAQ43) shall not be installed at night.		

Table 1 (cont.) Summary of Nunavik Nickel Project mitigation measures.

Component Affected	Project Phase	Source of Impact	Description of Impact	Source[1]	Mitigation Measures	Significance of Residual Impact	Follow-up
Aquatic wildlife and sea mammals (cont.)	Operation	Tailings storage site, waste rock piles, mine pits and mine effluents	Mortalities and possible change in aquatic communities downstream of outfalls	EA: p. 382–383, 398–399 CEAA2	***General:*** **FAQ12**: Culverts shall be installed so as not to impede the flow of water (base of culverts set beneath the natural stream bed, riprap used for stabilization, etc.). **FAQ13**: A mobile mine drainage treatment unit shall be installed downgradient of Ivakkak, Mequillon and Mesamax waste rock piles and a permanent treatment unit shall be used to purify process water at the Expo industrial complex. **FAQ14**: Solids shall be removed from domestic sewage using a mobile biodisc treatment unit and the waste water shall be disinfected using ultraviolet treatment. **FAQ54**: The water intake shall be equipped with a screen complying with the requirements listed in the DFO guideline on freshwater intake end-of-pipe fish screens. The intake shall be designed to avoid not only the entrainment but also the impingement of fish (CEAA2) ***Specific:*** **FAQ16**: Culverts shall be laid at the same slope as the natural stream bed and baffles shall be installed if flow exceeds 1.2 m/s. **FAQ17**: Culverts shall be laid in steps to concentrate flow during the low-water period. **FAQ18**: No measures shall be taken to accommodate fishermen (e.g., transportation, preserving catches) in order to reduce fishing pressure. **FAQ19**: A fishing program shall be established to provide guidelines for fishing in a number of bodies of water. **FAQ47**: Shipping in Deception Bay shall be avoided during the break-up period from mid-March to mid-June (period of seal pupping and increased hunting by Inuits).	Minor	Monitoring fish populations (EA: p. 530); Monitoring benthic invertebrate communities (EA: p. 530–531); Toxicity tests (EA: p. 531–532); Monitoring of fish catches by mine employees (EA: p. 534); Monitoring of the stability of culverts and the free circulation of fish (EA: p. 533–534); Monitoring of shipping in Deception Bay (Navigation: p. 61)
		Berm-bridge, reservoir, port infrastructure and access roads	Loss and modification of fish habitat				
		Workforce	Increased fishing pressure near mine facilities				
		Port facilities and shipping	Occasional disturbance of fish and sea mammal activity in Deception Bay	Addendum No. 2: p. 21 Navigation: p. iv, 35–37, 42	***Specific:*** **FAQ15**: Adequate instream flow shall be maintained in the Puvirnituq River between June and September for the fish pass to work properly. **FAQ37**: A 1.1-m^3/s instream flow shall be maintained in spring when filling the reservoir upstream of the berm-bridge. **FAQ38**: The berm-bridge shall have a fish pass to ensure the free movement of fish. **FAQ49**: Ships serving the mine complex shall, to the extent possible, be equipped with propellers designed to minimize cavitation (reducing noise and air bubbles). **FAQ50**: Ships shall not travel at speeds exceeding 7 knots in Deception Bay. **FAQ51**: Only two trips shall be made during the ice period unless agreements are negotiated with the community of Salluit. **FAQ52**: The tonnage of ships shall be maximized to minimize the number of trips required.		
Land mammals	Construction	All construction work and air transport	Noise disturbance for several mammal species	EA: p. 398–399	***General:*** **MTR1**: Prior and regular inspection of machinery shall be performed to ensure that it is in good condition and working properly. **MTR2**: Machinery traffic shall be limited to work areas. ***Specific:*** **MTR3**: A survey of Arctic fox dens shall be conducted in all eskers likely to be used during mine construction.	Minor	General monitoring and follow-up during construction
		Borrow pit operation	Possible loss of Arctic fox dens				

Table 1 (cont.) Summary of Nunavik Nickel Project mitigation measures.

Component Affected	Project Phase	Source of Impact	Description of Impact	Source[1]	Mitigation Measures	Significance of Residual Impact	Follow-up
Land mammals (cont.)	Operation	All mine facilities	Habitat loss for all land animals and Arctic fox behaviour modification	EA: p. 403–404	***General:*** **MTR4**: Workers shall be prohibited from feeding Arctic foxes and informed of the consequences that might have. **MTR5**: Household waste shall be stored in closed containers before being incinerated. **MTR1**: Prior and regular inspection of machinery shall be performed to ensure that it is in good condition and working properly (minimizing noise). **MTR2**: Machinery traffic shall be limited to work areas.	Minor	Monitoring wildlife (collision with large animals) (EA: p. 534)
		Road system, road traffic, machinery operation, mine pits and service buildings	Possible change in caribou migration patterns				
		Road neteword, road traffic, machine operation, pits and service buildings	Possible change in caribou migration patterns	KEQC: p. 81	***Specific:*** **MTR6**: A wildlife and flora protection plan shall be developed.		
Birds	Construction	All exploration activities and construction work	Disturbance of breeding pairs and migrating birds near construction sites and along roads	EA: p. 407–408 CEAA2	***General:*** **FAV1**: Traffic shall be limited to work areas. **FAV2**: Habitats next to jobsites shall be protected. **FAV3**: The extent of stripping and levelling shall be limited. ***Specific:*** **FAV4**: It shall be prohibited to fly over the cliffs southwest of Mequillon from June to September (peregrine falcon and golden eagle breeding period). ***Specific:*** Canadian Royalties undertakes to prevent nesting by performing bird scaring at Deception Bay from snowmelt (early June) to the start of construction work (about mid-July). The absence of nests on the work site shall be confirmed visually and by photos before work starts (CEAA2)	Minor	General monitoring and follow-up during construction
	Operation	All mine facilities and ore-mining activities	Breeding and feeding habitat loss	EA: p. 410	***General:*** **FAV1**: Traffic shall be limited to work areas. **FAV2**: Habitats next to jobsites shall be protected. ***Specific:*** **FAV4**: It shall be prohibited to fly over the cliffs southwest of Mequillon from June to September (peregrine falcon and golden eagle breeding period).	Minor	General follow-up
		Land, air and sea transportation	Disturbance of breeding pairs and migrating birds near facilities				
		Presence of access roads (increased access to region)	Increased harvesting pressure				
		Presence of reservoir	Creation of potential habitats for certain bird species				
Economy	Construction	All exploration and mine construction activities	Job creation and economic spinoffs	EA: p. 414–415	***Enhancement measures:*** **ECO1**: Hiring shall give preference to Inuit workers. **ECO2**: An information and recruitment program shall be introduced in Inuit villages. **ECO3**: A training program designed especially for future Inuit workers shall be introduced. **ECO4**: In tendering procedures, companies favoured shall be those whose head office is based in Nunavut (secondly those based in Abitibi, next those based in Quebec, before calling upon the services of foreign firms). **ECO5**: A sales outlet for Inuit handicrafts shall be established on the site.	Positive	General monitoring and follow-up during construction
	Operation	Routine mining operations	Job creation and economic spinoffs	EA: p. 417–418	***Enhancement measures:*** **ECO6**: An Impact Benefits Agreement shall be signed with the Makivik Corporation before construction starts in order to favour local economic spinoffs for the entire duration of the project. **ECO7**: Inuit workers hired for construction shall be given preference for the operational phase of the project. **ECO8**: Scenarios shall be studied with the Makivik Corporation for setting up secondary commercial operations.	Positive	General follow-up
		Mine facilities and activities	Economic spinoffs shared with the Inuit villages affected by the mine project				

Table 1 (cont.) Summary of Nunavik Nickel Project mitigation measures.

Component Affected	Project Phase	Source of Impact	Description of Impact	Source[1]	Mitigation Measures	Significance of Residual Impact	Follow-up
Workforce	Operation	Routine mining operations	Substantial workforce mobility and lifestyle changes at the mine	EA: p. 420	***General:*** **MOE1**: Mechanisms shall be introduced to help workers fit in. **MOE2**: Information sessions covering living conditions on the mine site and rules shall be designed especially for workers. **MOE3**: Consumption of alcohol and drugs shall be prohibited on the mine site. **MOE4**: Access to the camp shall be limited to workers and authorized visitors. **MOE5**: Disciplinary measures shall be taken against those whose behaviour is discriminatory. ***Specific:*** **MOE6**: A training program designed especially for future Inuit workers shall be introduced. **MOE7**: It shall be possible for Inuit workers to work a shorter rotation schedule (two weeks of work followed by two weeks off). **MOE8**: Scholarship programs related to mining and geology shall be made available. **MOE9**: An employment agent shall be hired to act as liaison between Native workers and supervisory staff. **MOE10**: Awareness sessions on Inuit culture shall be offered to non-Native employees.	Major	General follow-up
Health and nutrition	Construction	All construction activities Presence of asbestos on the site where port facilities will be built	Risk of work-related accidents Potential health risk for workers	EA: p. 423	***General:*** **SAN1**: An occupational health and safety program shall be introduced. **SAN2**: Awareness shall be promoted among workers and training given to them regarding this issue. ***Specific:*** **SAN3**: At Deception Bay, the soil shall be sprayed before stripping to minimize airborne asbestos.	Very minor	General monitoring and follow-up during construction
	Operation	All routine mine activities Machinery operation and traffic, open-pit mines Berm-bridge and reservoir Mine activities	Risk of accidents and disease for workers Risk of drinking water contamination Possible increase in reservoir fish mercury levels Inuit lifestyle and diet changes	EA: p. 425–426	***General:*** **SAN1**: An occupational health and safety program shall be introduced. **SAN2**: Awareness shall be promoted among workers and training given to them regarding this issue. **SAN4**: Special measures shall be taken to protect workers exposed to asbestos fibre. **SAN5**: Equipment shall be used to protect employees against copper and nickel dust if the time-weighted average exposure value exceeds 1 mg/m^3). **SAN6**: A workplace hazardous materials information system (WHMIS) shall be implemented. ***Specific:*** **SAN7**: Crushers and grinders shall be equipped with dust collectors leading to a dust extractor. **SAN8**: Filter canisters used shall be designed so that they are sealed inside a bag when they are removed or, if of another design, shall be used in conjunction with appropriate safety gear.	Moderate	Monitoring and control of asbestos fibres inside the crushing and grinding unit (EA: p. 532–533); Monitoring of drinking water quality (EA: p. 533), Monitoring of dust emissions (EA: p. 532)
Social organization	Operation	Mine facilities and routine mine operations	Change in Inuit lifestyle	EA: p. 434	***General:*** **ORS1**: It shall be possible for Inuit workers to work a shorter rotation schedule (two weeks of work followed by two weeks off). **ORS2**: Several telephones shall be available to facilitate communication between workers and their families.	Minor	General follow-up
Transport-ation and communicat-ions	Construction	Road system Shipping	Increased access to the territory Disrupted travel in Deception Bay	EA: p. 436	***General:*** **TRC1**: The road shall be marked and traffic signs put up where snowmobile and ATV trails intersect the road. ***Specific:*** **TRC2**: Shipping in Deception Bay shall be avoided during the break-up period from mid-March to mid-June (period of seal pupping and increased hunting by Inuits).	Very minor	General monitoring and follow-up during construction; Monitoring of shipping in Deception Bay (Navigation: p. 61)
				Navigation: p. 35, 37, 42, 61	***Specific:*** **TRC5**: Ships shall not travel at speeds exceeding 7 knots in Deception Bay.		

Table 1 (cont.) Summary of Nunavik Nickel Project mitigation measures.

Component Affected	Project Phase	Source of Impact	Description of Impact	Source[1]	Mitigation Measures	Significance of Residual Impact	Follow-up
Transport-ation and communicat-ions (cont.)	Operation	Road system Shipping	Increased access to the territory Disrupted travel in Deception Bay	EA: p. 438	***General:*** **TRC1**: The road shall be marked and traffic signs put up where snowmobile and ATV trails intersect the road. ***Specific:*** **TRC2**: Shipping in Deception Bay shall be avoided during the break-up period from mid-March to mid-June (period of seal pupping and increased hunting by Inuits). **TRC3**: A prior agreement shall be negotiated with the Inuit if CRI needs to bring ships into the bay during the break-up period. **TRC4**: A warning protocol shall be established for ships travelling in Deception Bay.	Minor	General follow-up; Monitoring of shipping in Deception Bay (Navigation: p. 61)
				Navigation: p. 35–39, 42–43, 61	***Specific:*** **TRC5**: Ships shall not travel at speeds exceeding 7 knots in Deception Bay. **TRC6**: Only two trips shall be made during the ice period unless agreements are negotiated with the community of Salluit. **TRC7**: Ships shall always take the same route in Deception Bay, i.e., the Xstrata shipping route, in order to minimize the impact on pack ice. **TRC8**: Ships shall travel along an S-shaped route in Deception Bay in winter to fragment the ice less. **TRC9**: An information program shall make local communities aware of the open ice cover in order to minimize the risks and its impact on hunting and fishing. **TRC10:** An ice bridge with adequate signage shall be maintained off Pointe Noire, if needed, to reduce the detour for snowmobilers (via the Xstrata ice bridge at the port).		
Land and resource manage-ment	Operation	Mine facilities and activities	Maintenance of resource sustainability and waste production	EA: p. 441	***General:*** **GTR1**: Possession of firearms shall be prohibited on the mine site. **GTR2**: No measures shall be taken to accommodate fishermen (e.g., transportation, preserving catches) in order to reduce fishing pressure. **GTR3**: Waste shall be disposed of in containers provided for that purposes to avoid having debris thrown into the water. **GTR4**: A waste management program shall be implemented, based on the 4R-D principle (reuse, reduction, recovery, recycling and disposal). ***Specific:*** **GTR5**: A fishing program shall be established to provide guidelines for fishing in a number of bodies of water (fishing rotated between two or three lakes, and possibly Deception Bay as well).	Minor	Monitoring of fish catches by mine employees (EA: p. 534); Monitoring wildlife (collision with large animals) (EA: p. 534)
Land and resource use	Construction	All construction activities Construction of a sea port and shipping	Disruption of traditional Inuit activities inland Disruption of traditional Inuit activities in Deception Bay	EA: p. 445–446 Navigation: p. 61	***General:*** **URT1**: No measures shall be taken to facilitate sports fishing (e.g., no transportation by helicopter). **URT2**: Possession of firearms on the mine site shall be prohibited (except with a special approval for protection against polar bears). **URT3**: Prior and regular inspection of machinery shall be performed to ensure that it is in good condition and working properly (to avoid producing excessive noise). ***Specific:*** **URT4**: Lakes used by the residents of Salluit and Kangiqsujuaq shall remain accessible. **URT5**: No measures shall be taken to accommodate fishermen (e.g., transportation, preserving catches) in order to reduce fishing pressure. **URT6**: A fishing program shall be established to provide guidelines for fishing in a number of bodies of water. **URT7**: Shipping in Deception Bay shall be avoided during the break-up period from mid-March to mid-June (period of seal pupping and increased hunting by Inuits).	Minor	General monitoring and follow-up during construction; Monitoring of shipping in Deception Bay (Navigation: p. 61)

Table 1 (cont.) Summary of Nunavik Nickel Project mitigation measures.

Component Affected	Project Phase	Source of Impact	Description of Impact	Source[1]	Mitigation Measures	Significance of Residual Impact	Follow-up
Land and resource use (cont.)	Operation	Mine facilities and activities Shipping	Disruption of traditional Inuit activities inland Disruption of traditional Inuit activities in Deception Bay	EA: p. 448–449 Navigation: p. 61	***General:*** **URT3**: Prior and regular inspection of machinery shall be performed to ensure that it is in good condition and working properly (to avoid producing excessive noise). **URT1**: No measures shall be taken to facilitate sports fishing (e.g., no transportation by helicopter). **URT2**: Possession of firearms shall be prohibited on the mine site. ***Specific:*** **URT6**: A fishing program shall be established to provide guidelines for fishing in a number of bodies of water. **URT5**: No measures shall be taken to accommodate fishermen (e.g., transportation, preserving catches) in order to reduce fishing pressure. **URT4**: Lakes used by the residents of Salluit and Kangiqsujuaq shall remain accessible. **URT7**: Shipping in Deception Bay shall be avoided during the break-up period from mid-March to mid-June (period of seal pupping and increased hunting by Inuits). **URT8**: Local communities shall be advised of the arrival and itinerary of ships in Deception Bay. **URT9**: A prior agreement shall be negotiated with the Inuit if CRI needs to bring ships into the bay during the break-up period.	Minor	Monitoring of fish catches by mine employees (EA: p. 534); Monitoring wildlife (collision with large animals) (EA: p. 534); Monitoring of shipping in Deception Bay (Navigation: p. 61)
Recreation and tourism	Operation	Air transport	Possible nuisance for users of Pingualuit National Park	KRG	***REC1****:* Unless specially authorized otherwise by Pingualuit Park authorities, CRI will ensure that the pilots of airplanes and helicopters flying for it are informed of the prohibition to fly over Puvirnituq River canyon, and over the park at an altitude of less than 2,000 ft (KRG Q/C20).	Minor	No follow-up is planned
Archaeology and heritage	Construction	All construction activities	Discovery of archaeological or historic remains during construction	EA: p. 453	***General:*** **ARC1**: If remains of importance are discovered, the site supervisor shall be informed immediately and measures taken to protect the site.	Minor	General monitoring and follow-up during construction
Ambient noise	Construction	All construction activities	Increased noise level around the construction site	EA: p. 455	***General:*** **SON1**: Prior and regular inspection of machinery shall be performed to ensure that it is in good condition and working properly (to avoid producing excessive noise). **SON2**: Machinery traffic shall be limited to work areas. **SON3**: The main sources of noise shall be insulated with a sound-absorbing material, when possible. **SON4**: It shall be mandatory for workers to wear hearing protectors if they are exposed to prolonged noise exceeding 85 dB.	Minor	General monitoring and follow-up during construction
	Operation	All mining activities	Increase noise level within the industrial complex, and near mine facilities and roads	EA: p. 457	***General:*** **SON1**: Prior and regular inspection of machinery shall be performed to ensure that it is in good condition and working properly (to avoid producing excessive noise). **SON2**: Machinery traffic shall be limited to work areas. **SON3**: The main sources of noise shall be insulated with a sound-absorbing material, when possible. **SON4**: It shall be mandatory for workers to wear hearing protectors inside very noisy buildings (e.g., the crushing and grinding unit).	Minor	Monitoring of noise level inside the plant (EA: p. 533)

Table 1 (cont.) Summary of Nunavik Nickel Project mitigation measures.

Component Affected	Project Phase	Source of Impact	Description of Impact	Source[1]	Mitigation Measures
Landscape	Construction	Presence of construction sites and storage areas	Deterioration of surrounding scenery	EA: p. 459	***General:*** **PAY1**: Stripping, clearing, excavation, backfilling and grading shall be minimized to maintain the natural topography. **PAY2**: When construction is completed, work areas shall be rehabilitated and restored so that they blend in as much as possible with the natural landscape (regrowth of vegetation).
	Operation	All mine facilities	Deterioration of surrounding scenery	EA: p. 461 KRG	***General:*** **PAY3**: The waste rock and tailings piles shall be rounded so that they blend in better with the surrounding landscape. **PAY4**: After the mine closes, disturbed sites shall be rehabilitated and restored by encouraging plant growth so they blend in with the natural landscape as much as possible, and mine facilities shall be dismantled and taken back south. **PAY5:** Canadian Royalties undertakes to install directional sodium lighting to minimize the light dispersed around its mine complex (KRG, Q/C19).

1 – Sources: EA = Environmental Assessment Main Report (Genivar, 2007)
CEAA = Document with answers to questions asked by the Canadian Environmental Assessment Agency (November 2007) (in French only)
CEAA2 = Document with answers to questions asked by the Canadian Environmental Assessment Agency – Series 2 (February 2008) (in French only)
KEQC = Document with answers to questions asked by the Kativik Environmental Quality Commission (October 2007)
Addendum No. 2 = Construction of a Berm-Bridge at Bombardier Outlet (Genivar, October 2007)
Navigation = Study on Maritime Navigation in Deception Bay (Genivar, November 2007)
KRG: Document with answers to questions asked by the Kativik Regional Government (March 2008).