Demande de la CNER faisant l'objet d'un examen préalable #125628
Igloolik New Power Plant

Type de demande :	New
Type de projet:	Centrale électrique
Date de la demande :	7/17/2021 2:11:30 PM
Period of operation:	from 0001-01-01 to 0001-01-01
Autorisations proposées:	from 0001-01-01 to 0001-01-01
Promoteur du projet:	Megan Larose Qulliq Energy Corporation PO Box 250 Iqaluit Nunavut X0A 0H0 Canada Téléphone :: 867 979 7553, Télécopieur ::

DÉTAILS

Description non technique de la proposition de projet

Anglais: Qulliq Energy Corporation (QEC) is a Government of Nunavut territorial corporation. Through the operation of 25 stand-alone diesel power plants, QEC is the sole provider of electricity to approximately 15,000 customers in the territory.Qulliq Energy Corporation is proposing to construct and operate a new power plant in the Hamlet of Igloolik located in the Qikiqtaaluk Region of Nunavut (the project). Igloolik is a community with increasing demand for electricity, reflecting its growing population. The existing Igloolik power plant was constructed in 1974 and has exceeded its design life. The installed firm capacity of the existing power plant is inadequate to meet the community's projected required firm capacity as early as 2022/2023. Without changes to the power generation infrastructure, the capacity shortfall will steadily increase with increased electricity demand in the community, resulting in reduced plant reliability.This multi-year project will include a new four-engine power generation facility designed for a 40-year life, with installed capacity of 3,450 kilowatts, and will incorporate new technology to improve reliability, efficiency, operation, and safety. The new plant will be capable of integrating renewable energy sources. Construction will include a fuel system consisting of two 90,000 litre double-walled, 110% contained horizontal fuel tanks and fuel piping and pumping facilities. Additionally, QEC has plans for a Quonset garage, transformer storage, pole racks, oil and glycol drum storage, and waste disposal area with containment. Space will be allocated for transient staff accommodations, sea cans for storage, and a back-up emergency generator.Upgrades to the existing distribution system will be required to connect to the new power plant. The main power plant building will include an office, electrical control room, mechanical room, and garage/workshop, in addition to the power generation hall. An approximately 250-metre fuel pipeline will be constructed to connect to the Petroleum Products Division (PPD) bulk fuel storage facility located to the south. The pipeline will be a combination of aboveground and underground construction.The proposed lot is approximately 8,516 square metres located on unsurveyed, untitled Commissioner's land, east of Lot 1000 Plan 1567 (airport property), and approximately 225 metres north of the PPD bulk fuel facility. A QEC land application was presented to, and approved by the Hamlet of Igloolik on June 17, 2021.There are no natural drainages, or watercourses within 100 metres of the project location. There are no designated wildlife areas, marine protected areas, territorial or national parks or Inuit owned lands in conflict with the power plant location. An archaeological impact assessment will be carried out in July 2021 to determine if archaeological sites are in potential conflict with the project and identify any necessary avoidance or mitigation measures.The project schedule is shown in Table 1.Table 1: Schedule for the Igloolik Power Plant ProjectTaskTimeline Secure land and complete archaeological impact assessmentMarch 2021 to March 2022Detailed engineering design April 2022 to March 2023Contracting and procurementApril 2023 to March 2024Construction April 2024 to December 2025 (seasonal)Testing and commissioningJanuary 2026 to March 2026Plant handover to QEC StaffMarch/April 2026The contractor awarded the construction tender will determine the required labour force to meet project requirements. It is estimated that approximately 21 workers will be on-site, depending on the construction phase. As per the Nunavummi Nangminiqaqtunik Ikajuuti (NNI) Regulation, contractors will be obligated to meet mandatory Inuit labour levels for all construction work.QEC has staff in Igloolik that are responsible for the day to day operation of the power plant. This includes a Plant Superintendent (full time), and two Assistant Operators (part time). It is expected that existing staff will transition over to the new power plant once it has been constructed and commissioned. No new staffing is anticipated to be required as a result of this project.The majority of construction materials for the Project will be delivered to the community by sealift. Some materials may be sourced locally or delivered via cargo plane depending on size and quantity. The contractor will be responsible for sourcing construction equipment. This may include a combination of sub-contracting locally available equipment or bringing equipment to the community through the annual sealift.This project is anticipated to provide an overall benefit to the Hamlet of Igloolik with more efficient use of diesel, a non-renewable resource, and the reduction of greenhouse gas emissions. It will also allow QEC to improve power generation infrastructure in the community, support continued community growth and achieve its mandate for the provision of safe, reliable electrical power to the communities it serves.

Français: La traduction en français n'a pas été identifiée comme une exigence pour cette communauté.

Inuktitut: ᖃᐅᓕᖅ ᐅᒡᒪᖅᑯᑎᓕᓇᐅᑦᑯᑦ ᓄᓇᕗᑦ ᒪᓴᒪᓱᐅᓂ ᑯᐊᐳᓗᑎᐸᐅᕗᖅ. ᐊᐅᓕᑎᑦᑎᓂᐅᑦᑯᑦ 25-ᓂᑦ ᐃᓄᑐᐸᓕᓕᑎᑲ ᐅᖅᓯᐊᓗᑦᑯᑦ ᐊᐅᓕᐅᓯᓚᕿᐃᖅᓂᑦ, ᐅᒡᒪᖅᑯᑎᓕᓇᐅᑦᑯᑦ ᐱᖃᖅᑎᑦᑎᐊᑐᕗᑦ ᓄᑭᓕᐅᑎᓂᑲ ᑕᒪᓂᖅᐃ 15,000 ᐱᐅᑦᑎᖅᓗᑎᑲ ᓄᓇᕗᒻᒥ.ᖃᐅᓕᖅ ᐅᒡᒪᖅᑯᑎᓕᓇᐅᑦᑯᑦ ᓴᓇᔪᒪᖅᒪᑕ ᐊᐅᓕᑦᑎᓕᖅᓗᑎᓗᓐᓂ ᓄᑎᒥ ᐊᐅᓕᐅᑎᖅᖃᐃᖅᒥᑦ ᐃᐠᓗᓕᓚᑲᑯᓂ ᖃᐹᒡᒪᓕᖅᒥ ᖃᑭᖅᑕᑐᖅᓱᖅᓴᐅᔪᖅ ᓄᓇᕗᒻᒥ (ᐱᓕᓇᐊᖅᔪᔪᖅ). ᐃᒡᓗᓕᑲ ᓄᓇᓕᐅᑦᓗᓂ ᐅᒡᒪᖅᑯᑎᓕᓇᐅᑦᑯᑦᑲᑐᖅᓯᓂᓕᒫᖅᑭᓐᓄᑦ. ᒎᓐᓇ ᐊᐅᓕᐅᑎᖅᖃᐃᑦ ᓴᓇᔨᐅᓕᐅᖅᓯᒪᖅᒪᑦ 1974-ᒥ ᖁᖅᑭᐅᑎᑦᓯᒪᓕᖅᓴᓂᓗ ᐊᑐᑭᓐᓇᓂᖅᓴᓗᒃ. ᐃᓕᐅᖅᑲᖅᑕᐅᓯᒪᓂᖅᒃ ᐱᔪᓐᓇᐅᒎᓐᓄᑦ ᐊᐅᓕᐅᑎᖅᖃᐃᐊᓗᖅᒥ ᓱᒪᒻᒪᒪᑦ ᐊᖅᔪᑦᑎᐊᓐᓇᐃᓕᓐᓂᑦ ᓄᓇᓕᖅᓂᓄᑦ ᓇᓕᐅᒎᓄᑦ ᐅᒡᒪᖅᑯᑎᑐᑭᓯᒪᔪᒍᑦ ᐅᒡᒪᖅᑯᑎᑐᑭᓯᒪᔪᒍᑦ ᐱᒪᐊᖅᑕᐅᔪᒪᓇᖅᑲᓂᓗ 2022/2023-ᒥ. ᐊᓂᔨᖅᑕᐅᖅᓚᒋᑦᑎᐊᖅᓗᑎᒃ ᐊᐅᓕᐅᑎᐊᓗᖅᓯᒋᑦᑕ ᐊᐅᓕᔪᓐᓇᐅᑎᖅᒋᑦ, ᐱᔪᓐᓇᖅᓂᓕᕆᔨᖅᑲᓂᑦ

ᐊᒥᒪᖅᓯᓂᐅᔨᖅ ᐱᑭᖅᐸᑦᓂᐊᑐᐃᓐᓇᓂᐊᖏᒪᑦ ᐱᙳᑦᓂᖅᓯᒪᓂᖅᐸᑕ ᓄᑭᑦᓂᐅᑎᑦᐅᐊᓂᑦ ᓄᓇᓂᖅ, ᐃᒪᐃᓂᖅᓴᓂᖅᖏᓄᑦ ᐊᐅᓂᐅᑎᖅᖏᐊᐃᑦ ᑕᑎᑎᔨᐅᔨᓐᓂᕆᔨᖅᓂᖅᖏᓄᓂᑦ. ᐅᓇ ᐊᖏᕐᕕᒪᓴᖅᓂᑦ ᐱᓂᓇᖅᔪᓕᕆᓂᖅ ᐃᓕᖅᖏᓂᐊᖅᑐᖅ ᑎᓴᒪᓂ ᐊᐅᓂᐅᑎᓂᑦ ᐃᓕᓂᓇᔨᐅᓪᓚᕆᓂᖅ ᐅᑭᐅᓇ 40-ᓄᑦ ᐊᑐᑭᓐᓇᓐᓂ, 3,450 ᑭᓇᙵᑦᓴ-ᓂᒃ, ᐃᓕᓂᐅᔭᓂᐊᖅᓇᑎᓄ ᓄᓇᓂᓐᓂᑦ ᐱᓕᕆᓂᖅᖏᓄᑦ ᐊᐅᑭᐅᓂᖅᓯᓂᑦ ᐃᓐᓇᓂᐅᑎᑦᐊᓇᖅᑐᑦ ᐊᑐᖅᑕᐅᓂᖅᖏᑦ, ᐅᓪᒪᖅᓂᖅᖏᑦ, ᐊᐅᓕᐅᓂᖅᖏᓐ ᐊᑦᑕᕐᓇᖅᑕᐅᓂᖅ. ᓄᙵᖅ ᐊᐅᓕᐅᑎᖅᖏᐃᒃ ᐃᓕᓂᐅᔭᔨᔪᓂᖅᓯᓂᐊᖅᑐᖅ ᐊᑐᒃᖅᓂᑭᖅᑐᓇᖅᑐᓂᑦ ᐅᑎᒪᖅᓄᓂᑦ. ᓴᓇᔨᐅᓂᐊᖅᑎᓯᐊᖅᑕᐅᖅ ᐅᖅᓱᓂᐲᐃᖅᓂ ᒪᖅᑭᖅᓂ 90,000 ᓂᑕ ᓇᕐᔾᑦ, 110% ᐅᖅᓱᐊᓂᖅᐅᑎᓂᒃ ᐊᒪᒪ ᓯᓪᓗᓂᒃᓄᑦ ᐅᖅᓱᔪᒍᓪ ᒥᓪᓗᐊᑭᑎᖅᑎᖅᖏᑦ. ᐊᒪᒪᓗᑦᑕᐅᖅ, ᐅᑎᒪᖅᓄᑎᓂᓇᔭᓄᑦ ᕿᖅᓴᓱᒪᔾᑦ ᓴᓇᓂᐊᑐᑎᓄᑦ ᓄᓇᓱᐅᑎᖅᖏᐊᖅᑐᑦ, ᐊᐅᓕᐅᑎᖅᖏᐊᖅ, ᓇᕿᕿᓄᓂᒃ, ᐊᒪᒪᓗ ᐅᖅᓱᔪᒍᑦ ᖃᓂᑕᐅᔨᖅᖏᐊᖅ, ᐊᑦᑕᕐᓇᖅᑐᑦ ᐊᐃᕿᕿᓄᓂᒃ ᐊᐅᓕᐅᑎᖅᖏᐊᔨᒃ ᓯᓪᓗᓂᐊᑐᐃᓐᓇᓐᓂᑦ ᐊᐅᓕᐅᑎᖅᖏᐊᔨᒃ ᓯᓪᓗᓂᐊᑐᐃᓐᓇᓐᓂᑦ ᐊᑐᖅᑕᐅᓂᖅᖏ

Operations Phase: from 2026-04-01 to 2046-03-31
Post-Closure Phase: from to

Activités

Emplacement	Type d'activité	Statut des terres	Historique du site	Site à valeur archéologique ou paléontologique	Proximité des collectivités les plus proches et de toute zone protégée
Proposed Lot Boundary_Igloolik	Fuel and chemical storage	Commissioners	The proposed lot is located on unsurveyed, untitled Commissioner's land, east of Lot 1000 Plan 1567 (airport property), and approximately 225 metres north of the PPD bulk fuel facility. The terrain within and surrounding the proposed lot is made up of broken rock and gravel and has not been previously developed. There are a number of sea cans located within the proposed lot that are suspected to belong to Canadrill as they currently occupy the adjacent lands to the northwest.	An archaeological impact assessment will be carried out in July 2021 to determine if archaeological sites are in potential conflict with the project and identify any necessary avoidance or mitigation measures.	The proposed power plant lot is located within the Municipal Boundary of the Hamlet of Igloolik, approximately 1.6 kilometres from the community core. There are no designated wildlife areas, marine protected areas, territorial or national parks or Inuit owned lands in conflict with the power plant location. There are no natural drainages, or watercourses within 100 metres of the project location.
Proposed Lot Boundary_Igloolik	Municipal and Industrial Development	Commissioners	The proposed lot is located on unsurveyed, untitled Commissioner's land, east of Lot 1000 Plan 1567 (airport property), and approximately 225 metres north of the PPD bulk fuel facility. The terrain within and surrounding the proposed lot is made up of broken rock and gravel and has not been previously developed. There are a number of sea cans located within the proposed lot that are suspected to belong to Canadrill	An archaeological impact assessment will be carried out in July 2021 to determine if archaeological sites are in potential conflict with the project and identify any necessary avoidance or mitigation measures.	The proposed power plant lot is located within the Municipal Boundary of the Hamlet of Igloolik, approximately 1.6 kilometres from the community core. There are no designated wildlife areas, marine protected areas, territorial or national parks or Inuit owned lands in conflict with the power plant location. There are no natural drainages, or watercourses within 100

			as they currently occupy the adjacent lands to the northwest.		metres of the project location.

Engagement de la collectivité et avantages pour la région

Collectivité	Nom	Organisme	Date de la prise de contact
Igloolik	Hamlet Land Development Officer	Hamlet of Igloolik	2021-06-04
Igloolik	Hamlet Chief Administrative Officer	Hamlet of Igloolik	2020-08-21
Igloolik	Hamlet Council	Hamlet of Igloolik	2020-08-11

Autorisations

Indiquez les zones dans lesquelles le projet est situé:

South Baffin

Autorisations

Organisme de régulation	Description des autorisations	État actuel	Date de l'émission/de la demande	Date d'échéance
Hamlets and Municipalities	Land application. Motion #77 approving the land application received 2021-06-17	Active	2021-06-17	
Government of Nunavut, Community Government & Services	Lease Agreement for Commissioner's Land. In progress subject to motion received from the Hamlet.	Applied, Decision Pending		
Hamlets and Municipalities	Development Permit	Not Yet Applied		
Government of Nunavut, Community Government & Services	Building Permit	Not Yet Applied		
Gouvernement du Nunavut, ministère du Développement économique et des Transports	Nunavut Airport Authority - Project Review and No Objection Letter	Not Yet Applied		
Transports Canada	Aeronautical Assessment	Not Yet Applied		
Autre	NavCanada - Land Use Proposal Submission Review and No Objection Letter	Not Yet Applied		
Office des eaux du Nunavut	Hydrostatic Test - Type B license for water use and disposal of test water (to be completed by the construction contractor)	Not Yet Applied		

Project transportation types

Transportation Type	Utilisation proposée	Length of Use
Air	Construction labour and some materials will be transported to the community by air	
Water	Construction equipment and materials will primarily be transported to the community by sea lift	

Project accomodation types

Collectivité

Utilisation de matériel

Équipement à utiliser (y compris les perceuses, les pompes, les aéronefs, les véhicules, etc.)

Type d'équipement	Quantité	Taille – Dimensions	Utilisation proposée
Excavator	1		excavation
Backhoe	1		excavation, material movement
Bulldozer	1		material excavation and movement
Grader	1		civil construction, level soil/gravel as needed
Compactor Machine	1		site compaction as required
Articulated Truck (Dump Truck)	1		transport of materials to, from, within construction site
Tower Crane	1		Lifting materials to height
Pile Boring/Drilling Equipment	1		pile installation
Boom Truck	1		lifting construction materials to height
Telehandler	1		carry/transport heavy loads on site
Fork Lift	1		carry/transport materials
Trailer	1		transport materials to, from, and with the construction site
Concrete Mixer	1		mix and pour concrete
Welding Machine	2		welding and steel cutting
Generator	4		Four generators will be installed in the power plant with a generating capacity of 3,450 kilowatts

Décrivez l'utilisation du carburant et des marchandises dangereuses

Décrivez l'utilisation de carburant :	Type de carburant	Nombre de conteneurs	Capacité du conteneur	Quantité totale	Unités	Utilisation proposée
Diesel	fuel	0	0	0	Liters	Fuel will be required during construction for all equipment used on site. Fuel storage and handling during construction will be the responsibility of the contractor. Details regarding the location and volume of fuel storage and location of equipment refueling during

						construction are not known at this time. The contractor will be required to have a fuel management plan.
Diesel	fuel	2	90000	180000	Liters	Fuel will be used/stored at the power plant to run the generators. Fuel will be stored in above-ground horizontal fuel storage tanks.
Solvent (Varsol)	hazardous	4	205	820	Liters	generator maintenance and operation
Engine Oil	hazardous	16	205	3280	Liters	Generator operation and maintenance
Propylene Glycol	hazardous	1	2000	2000	Liters	Power plant operations, heat transfer

Consommation d'eau

Quantité quotidienne (m3)	Méthodes de récupération de l'eau proposées	Emplacement de récupération de l'eau proposé
0	To be determined by the construction contractor.	To be determined by the construction contractor.

Déchets

Gestion des déchets

Activités du projet	Type des déchets	Quantité prévue	Méthode d'élimination	Procédures de traitement supplémentaires
Municipal and Industrial Development	Déchets combustibles	unknown	Disposal of construction waste will be the responsibility of the contractor. If permitted by the Hamlet, some waste may be disposed of at the local landfill. During operations, QEC will dispose of domestic waste in the local landfill if permitted by the Hamlet. Waste that is not permitted in the local landfill will be shipped south as part of QECs annual waste shipment.	none
Fuel and chemical storage	Déchets combustibles	unknown	Disposal of construction waste will be the responsibility of the contractor. If permitted by the Hamlet, some waste may be disposed of at the local landfill. During operations, QEC will dispose of domestic waste in the local landfill if permitted by the Hamlet. Waste that is not permitted in the local landfill will be shipped south as part of QECs annual waste shipment.	none
Fuel and chemical storage	Déchet dangereux	2,050 Litres	The amount of liquid waste during operation will vary annually. Waste fuel, oil, glycol and solvent will be collected in drums, stored within secondary containment and shipped south for disposal.	none
Fuel and chemical storage	Déchets non combustibles	unknown	The amount of non-combustible waste generated during construction is unknown. The	none

			construction contractor will be responsible for the management and proper disposal of non-combustible waste. The amount of non-combustible waste generated during operation will vary annually. The material will be stored in quatrex bags or other appropriate containment and shipped south for disposal.	
Municipal and Industrial Development	Déchets non combustibles	unknown	The amount of non-combustible waste generated during construction is unknown. The construction contractor will be responsible for the management and proper disposal of non-combustible waste. The amount of non-combustible waste generated during operation will vary annually. The material will be stored in quatrex bags or other appropriate containment and shipped south for disposal.	none
Municipal and Industrial Development	Mort-terrain (sol organique, déchets, résidus)	unknown	Disposal of overburden and soil/rock excavated for the power plant to be determined by the contractor in communication with the Hamlet. Volume to be determined. If possible, some overburden material may be used to build up other areas within the plant site.	none

Répercussions environnementales :

Please refer to the attached Project Description document (Table 4). Note: The environmental impact identified for permafrost, sediment and soil quality, air quality, and noise levels should be negative/mitigable for the construction and operation phases of the Municipal and Industrial Development and Fuel and Chemical Storage activities. The selection changes automatically to negative/non-mitigable every time this page is viewed.

Additional Information

SECTION A1: Project Info

SECTION A2: Allweather Road

SECTION A3: Winter Road

SECTION B1: Project Info

SECTION B2: Exploration Activity

SECTION B3: Geosciences

SECTION B4: Drilling

SECTION B5: Stripping

SECTION B6: Underground Activity

SECTION B7: Waste Rock

SECTION B8: Stockpiles

SECTION B9: Mine Development

SECTION B10: Geology

SECTION B11: Mine

SECTION B12: Mill

SECTION C1: Pits

SECTION D1: Facility

SECTION D2: Facility Construction

SECTION D3: Facility Operation

SECTION D4: Vessel Use

SECTION E1: Offshore Survey

SECTION E2: Nearshore Survey

SECTION E3: Vessel Use

SECTION F1: Site Cleanup

SECTION G1: Well Authorization

SECTION G2: Onland Exploration

SECTION G3: Offshore Exploration

SECTION G4: Rig

SECTION H1: Vessel Use

SECTION H2: Disposal At Sea

SECTION I1: Municipal Development

Please refer to the attached Project Description document.

Description de l'environnement existant : Environnement physique

Please refer to the attached Project Description document.

Description de l'environnement existant : Environnement biologique

Please refer to the attached Project Description document.

Description de l'environnement existant : Environnement socio-économique

Please refer to the attached Project Description document.

Miscellaneous Project Information

Identification des répercussions et mesures d'atténuation proposées

Please refer to the attached Project Description document.

Répercussions cumulatives

Please refer to the attached Project Description document.

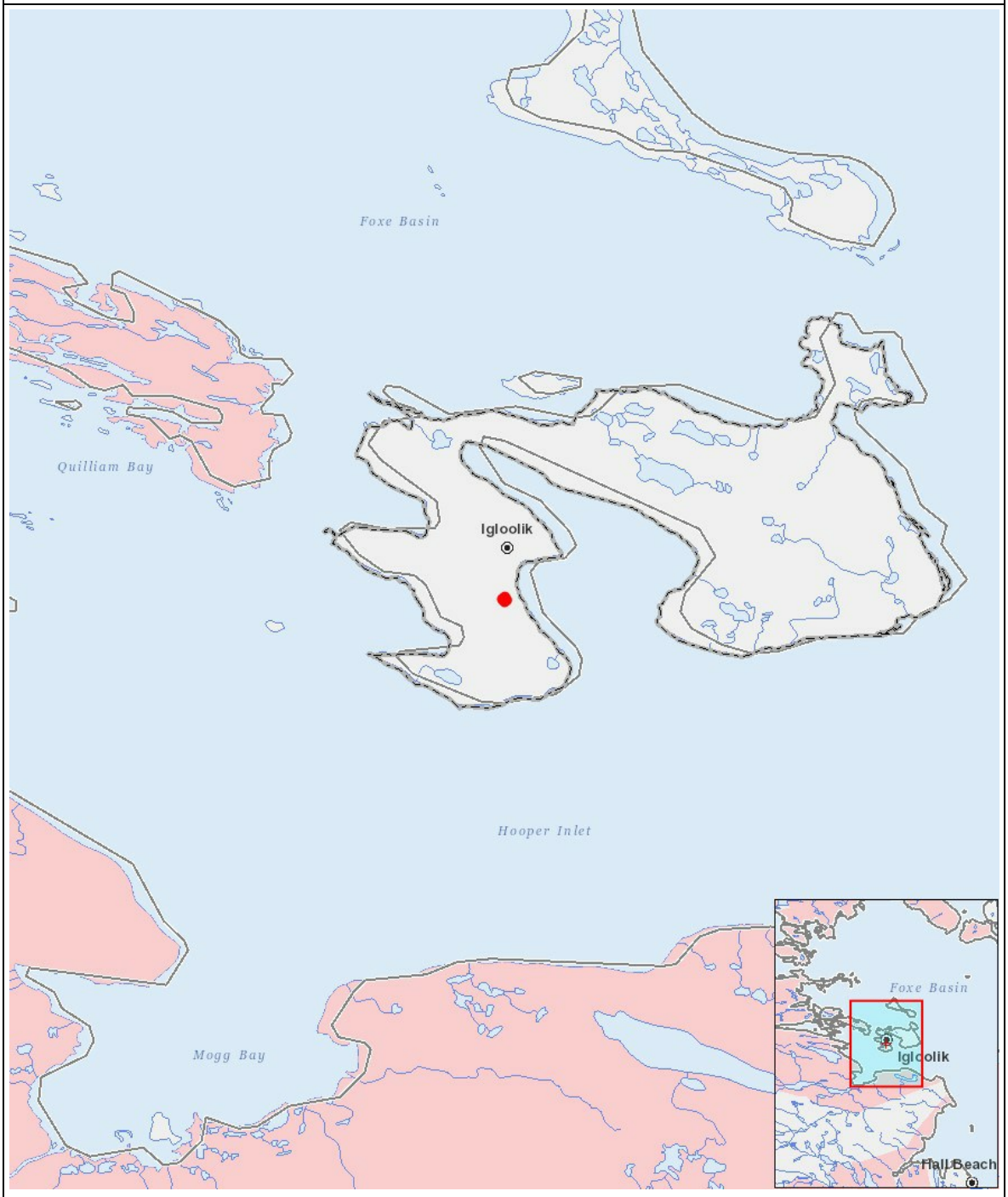
Impacts

Identification des répercussions environnementales

	PHYSICAL	Designated environmental areas	Ground stability	Permafrost	Hydrology / Limnology	Water quality	Climate conditions	Eskers and other unique or fragile landscapes	Surface and bedrock geology	Sediment and soil quality	Tidal processes and bathymetry	Air quality	Noise levels	BIOLOGICAL	Vegetation	Wildlife, including habitat and migration patterns	Birds, including habitat and migration patterns	Aquatic species, incl. habitat and migration/spawning	Wildlife protected areas	SOCIO-ECONOMIC	Archaeological and cultural historic sites	Employment	Community wellness	Community infrastructure	Human health
Construction																									
Fuel and chemical storage		-	-	M	-	-	-	-	-	M	-	M	M		-	-	-	-	-		U	P	-	P	-
Municipal and Industrial Development		-	-	M	-	-	-	-	-	M	-	M	M		-	-	-	-	-		U	P	-	P	-
Exploitation																									
Fuel and chemical storage		-	-	M	-	-	-	-	-	M	-	M	M		-	-	-	-	-		-	-	-	P	-
Municipal and Industrial Development		-	-	M	-	-	-	-	-	M	-	M	M		-	-	-	-	-		-	-	-	P	-
Désaffectation																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-

(P = Positive, N = Négative et non gérable, M = Négative et gérable, U = Inconnue)

Site du projet



Liste des géométries de projet

1	polygon	Proposed Lot Boundary_Igloolik
2	point	FourCorners_706_Igloolik_PwrPlnt_Location