

Personnel

Personnel on site: 32

Days on site: 350

Total Person days: 11200

Operations Phase: from 2019-07-15 to 2021-12-31

Operations Phase: from 2021-12-31 to 2049-12-31

Post-Closure Phase: from to

Activities

Location	Activity Type	Land Status	Site history	Site archaeological or paleontological value	Proximity to the nearest communities and any protected areas
ForNPC	Municipal and Industrial Development	Commissioners	Site was recently a rock quarry.	No Identified archaeological or paleontological value.	Within the community industrial section next to the fuel tank farm.
ForNPC	Fuel and chemical storage	Commissioners	Site was recently a rock quarry.	No Identified archaeological or paleontological value.	Within the community industrial section next to the fuel tank farm.

Community Involvement & Regional Benefits

Community	Name	Organization	Date Contacted
Kugluktuk	Lori Kimball. Deputy Minister, CGS	Community and Government Services	2018-05-01
Kugluktuk	Donald LeBlanc	Hamlet of Kugluktuk	2016-11-22

Authorizations

Indicate the areas in which the project is located:

Kitikmeot

Authorizations

Regulatory Authority	Authorization Description	Current Status	Date Issued / Applied	Expiry Date
Environment and Climate Change Canada	registration of bulk fuel storage system	Not Yet Applied		
Hamlets and Municipalities	Municipal Development Permit	Not Yet Applied		

Project transportation types

Transportation Type	Proposed Use	Length of Use
Land	1/2 ton pickup truck	

Project accomodation types

Community

Material Use

Equipment to be used (including drills, pumps, aircraft, vehicles, etc)

Equipment Type	Quantity	Size - Dimensions	Proposed Use
Excavator	1	large	Perform civil work to prepare land for foundation
Loader	1	Large	Perform moving of equipment and materials during construction of power plant
Driller	1	2m X 3m x3m	Drill piles for foundation of power plant

Detail Fuel and Hazardous Material Use

Detail fuel material use:	Fuel Type	Number of containers	Container Capacity	Total Amount	Units	Proposed Use
Diesel	fuel	1	205	205	Liters	Run heavy equipment
Diesel	fuel	2	90000	180000	Liters	Operate diesel generators
Ethylene Glycol	hazardous	5	1000	5000	Liters	Engine coolant

Water Consumption

Daily amount (m3)	Proposed water retrieval methods	Proposed water retrieval location
2	Municipal truck delivery	Municipal water source

Waste

Waste Management

Project Activity	Type of Waste	Projected Amount Generated	Method of Disposal	Additional treatment procedures
Fuel and chemical storage	Combustible wastes	3000 liters	Burn in waste oil furnace	Send south for recycling
Fuel and chemical storage	Non-Combustible wastes	3000 liters	Ship south for disposal	none

Environmental Impacts:

Building the structures will change the makeup of the ground and could alter the permafrost under them. QEC has committed to an engineered design which will eliminate this risk by constructing a foundation which will not affect the perma-frost. A pile foundation will mitigate this risk. The two 90,000 liter fuel tanks will be 110% contained, double wall and be mounted on a concrete slab. All outside liquid hazardous material storage areas will be lined and slightly hollow so as to contain spills and leaks. Otherwise products and waste will be stored in a leak proof sea-can. The new plant will be much more environmentally friendly with the newest technology engines and hospital grade silencers. Building the plant away from residential areas will result in less risk to the public. The plant will be built with a 40 year life span and will be able to integrate various forms of sustainable energy such as solar and wind. One of the single most important ways QEC mitigates risk is by training personnel. QEC is fully committed training on all levels to assure that we meet all regulation on health safety and the environment.

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

Description of Existing Environment: Physical Environment

This is land in the industrial section of town and most recently was the municipal gravel pit.

Description of Existing Environment: Biological Environment

Rock and gravel no plant life

Description of Existing Environment: Socio-economic Environment

Commissioner's land ideal spot for a power plant due to the proximity of the fuel source

Miscellaneous Project Information

Identification of Impacts and Proposed Mitigation Measures

There are no immediate impacts from the construction of a power plant but due to operations storing and using diesel fuel real potential of impacts exist. Also generation, storage and transportation of liquid wastes poses threats to the environment. Mitigation measures include engineered controls and administrative controls. Fuel storage systems are designed with automated shut off during transfers to prevent overflow. All fuel and hazardous waste are stored with secondary containment to prevent entry into the natural environment. Visual checks are performed daily and recorded monthly and all staff are trained to prevent spills and leaks and to effectively respond in case of an incident. If a spill does occur we work with regional regulators to clean it up immediately and completely. This plant is unique in that funding is provided for a sizable solar array which will offset some quantity of diesel fuel.

Cumulative Effects

Due to the length of time a power plant is designed to operate, cumulative effects can build over time. Our practices include immediate and sustained response to incidents to mitigate the potential for cumulative effects due to operational activities.

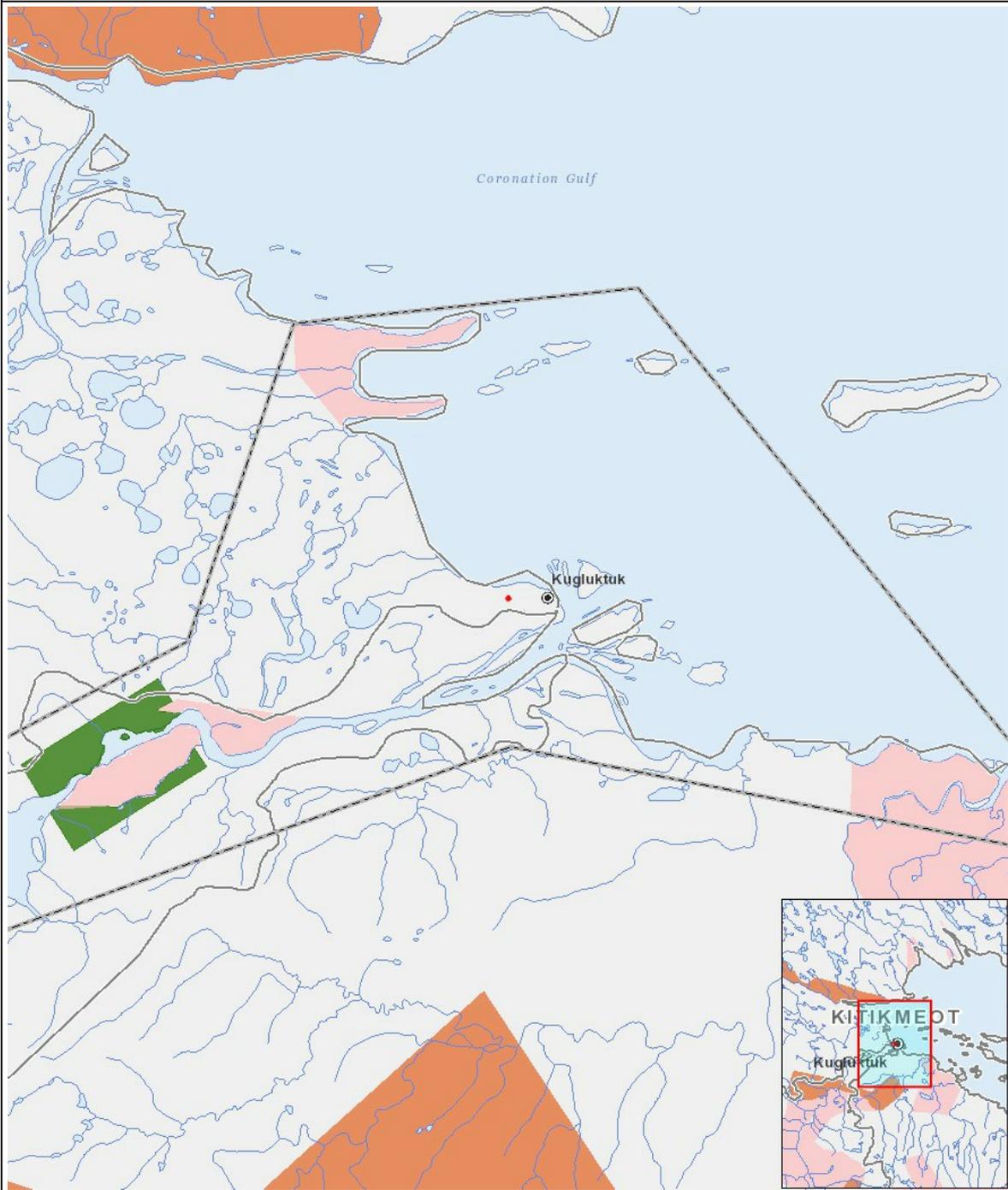
Impacts

Identification of Environmental Impacts

	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	-	N	N	-	-	-	-	-	N	-	N	-	-	-	-	-	-	-	-	P	-	-	-	-	
Operation																									
Fuel and chemical storage	-	N	N	-	-	-	-	-	N	-	N	-	-	N	-	-	-	-	-	P	-	-	-	-	
Decommissioning																									
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

(P = Positive, N = Negative and non-mitigatable, M = Negative and mitigatable, U = Unknown)

Project Location



List of Project Geometries

1	polygon	ForNPC
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