



Nunavut Research Institute
Nunavummi Qaujisaqtulirijikkut

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SCIENTIFIC RESEARCH LICENCE APPLICATION

(Land, Freshwater & Marine Based Research)

This application fulfills the requirements for NIRB environmental screening

SECTION 1: APPLICANT INFORMATION

1. Applicant's full name and mailing address:

Qulliq Energy Corporation
PO Box 250 Iqaluit, Nunavut X0A 0H0
Attention: Jamie Flaherty

Phone: 867-979-7560

Fax: 867-979-5930

E-mail:
jflaherty@npc.nu.ca

2. Field Supervisor (address, if different from above):

Richard Cook
Knight Piesold Ltd., 1650 Main Street West, North Bay, Ontario P1B 8G5

Phone: 705-476-2165

3. Other Personnel list (name and position):

Oscar Gustafson, R.P.Bio. (Senior Fisheries Biologist)
Maret Tae (Senior Biologist, Ornithologist) or Matt Evans (Ornithologist)
Jessica Mackie and Shannon Roach (Environmental Technicians)
Local field assistants (not yet identified)

Total # of personnel: 6

Total # of person days: 200

SECTION 2: AUTHORIZATION NEEDED

4. List the organisations you will contact for necessary authorizations associated with the project.

Federal Department of Fisheries and Oceans – Permits for fisheries studies
Nunavut Department of Environment – wildlife research permit

5. List the active permits, licences, or rights related to the project and their expiry date:

n/a

SECTION 3: PROJECT PROPOSAL DESCRIPTION

6. Proposed project title: Iqaluit Hydroelectric Environmental Baseline Studies

7. Project duration:

Period of operation: June 1, 2006 to June 1, 2009

8. Location(s) of data collection:

- Land Status Types: Crown, Commissioners', Inuit Owned Surface Lands, Inuit Owned Sub-Surface Lands, & Other
- Please ensure that maps of the project area are attached (1:50 000, 1:250 000)

Location Name	Region	Latitude (north)	Longitude (west)	NTS Map sheet #	Land Status
Armshow Long	Baffin	63° 35'	68° 55'	25N	Crown
Armshow Right Lake	Baffin	63° 33'	68° 55'	25N	Commissioners' (Park)
Jaynes Inlet	Baffin	63° 12'	68° 24'	25N	Crown
Sylvia Grinnell	Baffin	64° 0'	68° 44'	26C, 25N	Crown
Cantley Bay	Baffin	63° 43'	67° 29'	26B, 25O	Crown
Anna Maria Port	Baffin	63° 48'	67° 54'	26C, 26B, 25N, 25O	Crown

NON-TECHNICAL PROJECT PROPOSAL SUMMARY

9. On a separate page, please include a non-technical description of the project proposal, no more than 300 words, in English & Inuktituk (Inuinaktun, if in the Kitikmeot). The project description should outline the project activities (research methods, camps, etc.) and their necessity, method of transportation, any structures that will be erected, expected duration of activity and alternatives considered. If the proposed activity fits into any long-term developments, please describe the projected outcome of the development for the area and its timeline.

SECTION 4: MATERIAL USE

10. List equipment (including drills, pumps, aircrafts, etc.):

Equipment type and number	Size-dimensions	Proposed use
Helicopter		Shuttle field crew to study sites, raptor survey
Electrofisher		Determine fish presence in shallow waters
Gill nets		Determine fish presence in deep waters
Minnow traps		Determine fish presence
Angling (fishing equipment)		Determine fish presence
Pressure transducer & dataloggers (5)		Measure stream flow

11. Detail fuel and hazardous materials use:

Fuels	Number of Containers	Capacity of Containers (gal & litres)
• Diesel	No fuel storage	
• Gasoline		
• Aviation fuel		
• Propane		
• Other		
Hazardous Materials	Number of Containers/Concentration	Capacity of Containers (gal & litres)
•	No hazardous materials used in the field	
•		
•		

12. Describe method of fuel transfer:

All fuel transfer will occur at the Iqaluit airport.

13. Describe any procedures and materials in place to handle accidental spills. Please attach the spill contingency plan and other appropriate information about the hazardous materials associated with the proposed project.

n/a

SECTION 5: WASTE DISPOSAL AND TREATMENT FACILITIES

14. Describe amount and methods of disposal:

Type of Waste	Projected Amount Generated	Method of Disposal	Additional Treatment Procedures
Sewage	n/a		
Grey water	n/a		
Garbage	n/a		
Overburden (organic soil, waste material, tailings)	n/a		
Hazardous waste:	n/a		
Other:	n/a		

All personal garbage belonging to the field crew (i.e., lunch bags) will be retained for proper disposal upon return to the community.

SECTION 6: RESTORATION AND ABANDONMENT PLANS

15. Describe or attach the proposed procedure for site restoration upon abandonment of any area associated with the project:

The proposed field program will not result in any site disturbance that would require restoration.

SECTION 7: ENVIRONMENTAL IMPACT

16. Indicate and describe the components of the environment that are near the project area, as applicable. Attach any relevant maps or information:

Type of species (common name, associated herd, etc.)	Important Habitat Area (calving, staging, denning, migratory pathways, spawning, nesting, etc.)	Critical time periods (calving, post-calving, spawning, nesting, breeding, etc.)
Example: <i>Narwhal</i>	<i>Ice floe edge in Pond Inlet</i>	<i>June-July, around break-up</i>
Fish:	Fish will be captured in accordance with fisheries research permits issued by DFO	Migration to the sea in early-June to mid-July, and return to inland waters in mid-August to late-September. Spawning in September-October is outside of study period.
Caribou:	Study areas may be used by caribou but are not identified calving grounds	Late-May to June (Calving) and July (post-calving)
Muskox:	No muskox in the region	n/a
Raptor:	Nesting sites on cliffs	Nesting period (June-July)
Migratory Birds:	Migratory birds expected to be near field activities at coastal areas	Nesting and rearing (June-July)
Waterfowl:	As per migratory birds	See above
Seals:	No marine work proposed	n/a
Whales:	No marine work proposed	n/a
Narwhals:	No marine work proposed	n/a
Canid family (wolves, wolverines, foxes, etc.)	Study areas not expected to be critical habitat to canids	n/a
Bears (grizzly, polar, black):	Polar bears deterrents / protection will be required. Study areas somewhat inland and not the focus area of polar bears during the summer season.	Denning (March) is outside the study period
Other:		
Eskers:	No physical disturbance proposed	n/a
Communities:	No disturbance to the community expected.	All times of the year
Historical/Archaeological sites:	No marine work proposed; any archaeological sites identified will be reported.	July-September (snow-free period)

Figure 1.1 shows the proposed study locations.

17. Indicate and describe other known uses of the area such as local development, traditional use (hunting/fishing/spiritual), outfitting, tourism, mineral development, research, etc.:

The mouth of the Armshow River and the Bay of Two Rivers, located downstream of the area of interest for this study, is heavily used by the community for fishing through the ice and in open water (Nunavut Wildlife Harvest Study 2004). Tourism activities (mainly hiking) take place in the Katannilik Territorial Park, located south of the Armshow River.

The Sylvia Grinnell River, where a stream flow gauge will be installed, is also heavily used by the community for recreation and subsistence fishing.

The Ward Inlet area was historically the location of camp settlement and is currently an important travel route. The areas of interest at Anna Maria Port and Cantley Bay are located inland and are removed from historical and contemporary use. Only limited subsistence fishing has been reported for these watercourses (Nunavut Wildlife Harvest Study 2004).

18. Describe the impacts of the proposed project activity on the environmental components and uses, in the area listed above:

The main potential impact of the environmental studies will be helicopter movements to transport the study team. The flow gauging and fisheries work is not expected to adversely impact the environment and existing land uses.

19. What are some suggested mitigation measures for these impacts?

Helicopter traffic can be directed to avoid other land users as much as possible by altering flight path and avoiding low altitude flying except for landing and take-off.

SECTION 7: COMMUNITY INVOLVEMENT & REGIONAL BENEFITS

20. List the community representatives that you have contacted about this proposed project:

See Table 1, attached.

21. Describe the level of involvement that the residents of Nunavut have had with respect to the proposed project. Elaborate on local employment opportunity, training programs, contracts, Inuit Impact Benefit Agreements (if applicable):

Local field assistants will be identified to participate in the field program. The land use and traditional knowledge study associated with this project will also involve local employment opportunities including a local researcher and/or translators and well as study participants.

1. Describe and attach documentation regarding community concerns or support for the proposed project:

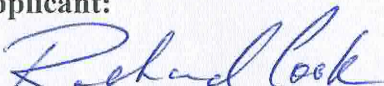
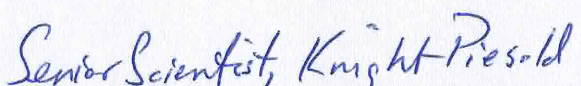
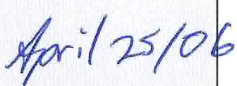
Local HTAs and community representatives have been supportive of the project. A hydro committee has been established, comprising representatives from QEC, QIA, City of Iqaluit, Amarok HTA, Kimmirut and Pangnirtung. The hydro committee will provide overall direction on the project and communicate the progress of the project to their respective committees/agencies.

23. Is there a Traditional Knowledge (TK) component to this research project?

Yes, a land use and traditional knowledge study will be conducted. An application will be made to the Nunavut Research Institute for a social sciences and traditional knowledge research permit.

24. Check YES ☐ or NO ☒ if you give NRI permission to release the applicants contact information in the Annual Compendium of Research Undertaken in Nunavut, published by the Nunavut Research Institute.

Applicant:

		
Signature	Title	Date