Effective June 16, 2006

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NUNAVUT IMALIRIYIN KATIMAYINGI
NUNAVUT WATER BOARD
OFFICE DES EAUX DU NUNAVUT

WATER LICENCE
APPLICATION FORM

Application for: (check one)

☐ **New** ☐ **Renewal** ☒ **Amendment** ☐ **Assignment** ☐ **Cancellation**

LICENCE NO:
(for NWB use only)

1. NAME AND MAILING ADDRESS OF APPLICANT/LICENSEE

Éric Trépanier
Director Land Environment
Chief of Land Staff
Department of National Defence
101 Colonel Drive
Ottawa Ontario K1A 0K2

Phone: 819-997-2766
Fax: 819-997-2777
E-mail: Trepanier.e@forces.gc.ca

Field Supervisor:
Captain Christopher Nobrega
Phone: 613-392-2811 ext 7421 Fax: 613-965-7420
Nobrega.ca@forces.gc.ca

2. ADDRESS OF CORPORATE OFFICE IN CANADA (if applicable)

Same as across.

Phone:
Fax:
E-mail:

3. LOCATION OF UNDERTAKING (describe and attach a topographical map, indicating the main components of the Undertaking)

***See attached project description**

Latitude: (° ' " N) Longitude: (° ' " W)
NTS Map Sheet No. _____Scale: _____

4. DESCRIPTION OF UNDERTAKING (attach plans and drawings)

*See attached project description

5. TYPE OF PRIMARY UNDERTAKING (A supplementary questionnaire **must** be submitted with the application for undertakings listed in **"bold"**)

☐ **Industrial**
☐ **Mining and Milling**(includes exploration/drilling)
☐ **Municipal** (includes camps/lodges)
☐ Power
☐ Agricultural
☐ **Conservation**
☐ Recreational
☒ **Miscellaneous** (describe below):

Canadian Forces individual training exercise See Schedule II of *Northwest Territories Waters Regulations* for Description of Undertakings

6. WATER USE

☒ To obtain water
☐ To cross a watercourse
☐ To modify the bed or bank of a watercourse
☐ Flood control
☐ To divert a watercourse
☐ To alter the flow of , or store, water

☒ Other (describe):

The community of Resolute Bay will provide potable water, in the form of ice blocks, for personal hydration and cooking. No water will be taken from a water body, nor will any substances be released into a water body. It's anticipated that approximately 5 to 6 ice blocks (each supplying approximately 20L of water) will be used per tent per day (Total: Approximately 500L per day). CF personnel will ensure re-supply of ice blocks to camps via BV-206, skidoo with attached komatick or by air re-supply on a daily basis or as necessary.

7. QUANTITY OF WATER INVOLVED (cubic metres per day including both quantity to be used and quality to be returned to source)

Water use ☒ $100m^3$/day or less
☐ Greater than $100m^3$/day; if greater, indicate quantities to be used for each purpose (camp, drilling, etc.)

Water returned to source
_____ m^3/day

8. WASTE (for each type of waste describe: composition, quantity (cubic metres per day), methods of treatment and disposal, etc.)

☒ Sewage
☒ Solid Waste
☐ Hazardous
☐ Bulky Items/Scrap Metal
☐ Waste oil
☐ Greywater
☐ Sludges
☐ Other describe):

While conducting field training away from the community of Resolute Bay, all waste, including sewage, will be collected in bags and redeployed to the community of Resolute Bay. Following the course's completion waste will be redeployed, with the course, to Trenton, Ontario for disposal. Any remaining fuels or unused hazardous materials drawn from the community will be returned as appropriate.

Sewage: Approximately 500L (0.5 cubic meters) of water consumed per day for personal hydration and cooking. All sewage and contaminated water resulting from that consumption will be contained in bags and returned to Resolute Bay.

Solid Waste: Type of solid waste expected - food storage containers. All solid waste will be stored in bags and returned to Resolute Bay.

9. OTHER PERSONS OR PROPERTIES AFFECTED BY THIS UNDERTAKING (give name, mailing address and location; attach if necessary)

Due to the use of BV-206s and the establishment of a camp between 100 and 400 person-days a class-B INAC land use permit has been obtained for this undertaking (permit # N2007J0044). An application to access Inuit Owned Lands has also been sent to the Qikiqtani Inuit Association.

Land Use Permit

DIAND	☒ Yes	☐ No	If no, date expected _____
Regional Inuit Association	☐ Yes	☒ No	If no, date expected February 2009
Commissioner	☐ Yes	☐ No	If no, date expected _____

10. PREDICTED ENVIRONMENTAL IMPACTS OF UNDERTAKING AND PROPOSED MITIGATION MEASURES (direct, indirect, cumulative impacts, etc.)

No water will be taken from a water body, nor will any substance be released into a water body. All national parks will be avoided during field exercises. All movements will be guided by local Canadian Rangers who will ensure Canadian Forces personnel remain outside sensitive area.

NIRB Screening ☐ Yes ☒ No If no, date expected _____

11. INUIT WATER RIGHTS

Will the project or activity substantially affect the quality, quantity, or flow of water flowing through Inuit Owned Lands and the rights of Inuit under Article 20 of the Nunavut Land Claims Agreement?

If yes, has the applicant entered into an agreement with the Designated Inuit organization to pay compensation for any loss or damage that may be caused by the alteration. If no compensation agreement has been made, how will compensation be determined?

No

12. CONTRACTORS AND SUB-CONTRACTORS (name, address and functions)

Local Canadian Rangers will be employed to assist in the implemenation of the course and to guide the movements of CF personnel.

13. STUDIES UNDERTAKEN TO DATE (list and attach copies of studies, reports, research, etc.)

14. THE FOLLOWING DOCUMENTS MUST BE INCLUDED WITH THE APPLICATION FOR THE REGULATORY PROCESS TO BEGIN

Supplementary Questionnaire (where applicable: see section 5) ☒ Yes ☐ No If no, date expected _____

Inuktitut and/or Inuinnaqtun/English Summary of Project ☒ Yes ☐ No If no, date expected _____

Application fee of $30.00 (Payee Receiver General for Canada) ☐ Yes ☒ No If no, date expected _____

Water Use fee of $30.00 (unless otherwise indicated in Section 9 of the *NWT Waters Regulations;* Payee Receiver General for Canada)

☐ Yes ☒ No If no, date expected _____

15. PROPOSED TIME SCHEDULE (unless otherwise indicated, the NWB will consider the application for a five (5) year term)

☐ one year or less (or) ☒ Multi Year

Start Date: March 1, 2008 Completion Date: March 1, 2012

Eric Trepanier	Director Land Environment		25/11/2008
Name (Print)	Title (Print)	Signature	Date

For Nunavut Water Board office use only

APPLICATION FEE	**Amount: $_____**	**Pay ID No.: _____**
WATER USE DEPOSIT	**Amount: $_____**	**Pay ID No.: _____**

Winter Warfare Advanced Course Session 6

General

1. The Canadian Army is proposing to conduct Winter Warfare Advanced Course (WWAC; formerly known as the advanced winter warfare course) session 6 over the two-month period of February 2009 to March 2009. The sub-arctic phase of the WWAC is proposed to occur in areas surrounding the City of Yellowknife, NWT. The high-arctic phase of the course will take place in the vicinity of Resolute Bay, Nunavut. The course will consist of a maximum of 45 Canadian Forces (CF) Personnel (36 candidates and 9 course instructors) as well as 9 local Canadian Rangers who will serve to assist in the implementation of the course and guide movements while in the field. The objective of the course is to train 36 CF specialists capable of advising their commanders on training and deployments in arctic and cold weather conditions.

Contacts

2. The designated DND point of contact for the environmental considerations of this project is:

Justin Thomas
Environmental Advisor
Director Land Environment
Chief of Land Staff (CLS/DLE)
Department of National Defence
101 Colonel By Drive
Ottawa, ON K1A 0K2

Tel: (819) 994-1064
Fax: (819) 997-2777
Email: Thomas.jt@forces.gc.ca

Locations

3. Proposed locations during the arctic phase of the WWAC (Lat/Long: degrees, minutes, seconds):

    a. Airfield:
    N74° 42' 02.1'' W094° 45' 20.8''

    b. Polar Continental Shelf Project (PCSP):
    N74° 43' 07.1'' W094° 59' 23.9''

    c. Survival Training Area:
    N74° 45' 13.2'' W094° 58' 46.4''

    d. Austere Range Area:
    N74° 42' 02.1'' W094° 53' 20.8''

    e. Little Cornwallis Island Airstrip (Polaris Mines)(planned patrol site):
    N75° 23' 14.3'' W096° 55' 41.9''

d. Post-course drills (19 March 2009 – 21 March 2009):
The final stage of the course will see CF personnel ensure that all sites have been returned to their previous condition and to prepare equipment for redeployment to Trenton, ON.

Activities

5. Course participants will be planning, mounting and executing a mock Sovereignty Patrol, employing Canadian Rangers and navigating while using GPS and astrocompass. Other activities will include:

- Nordic Skiing;
- Ski-joring;
- Light oversnow vehicle use (LOSV; skidoo) ;
- Medium oversnow vehicle use (MOSV; BV206);
- Towing loads
- Communicating in arctic conditions;
- Assessing the effects of cold on training;
- Conducting re-supply operations;
- Applying First Aid in arctic conditions;
- Conducting casualty evacuation;
- Demonstrating arctic survival techniques;
- Ice-fishing (all personnel will possess appropriate Territorial fishing licences);
- Establishing bivouacs;
- Constructing field defences and snow obstacles;
- Conducting tactical training; and
- Conducting community relations' activities

Waste Removal

6. No water will be taken from a water body nor will any substance be released into a water body. While the course is operating in the field, resupply of water (in the form of 20L ice blocks) and fuel will occur on a daily basis or as required using MOSV, LOSV with attached komatik and/or air re-supply as required. All water and fuel will be drawn from the community of Resolute Bay. Garbage and all contaminated water (including sanitary sewage) generated in the field will be collected in bags, redeployed to the community of Resolute Bay and ultimately redeployed for disposal to Trenton, ON following the completion of the course. All site locations will be returned to their previous condition upon departure.

Equipment

7. All transportation in the field will be conducted by LOSV, MOSV, ski, or ski-joring. Local Canadian Rangers will guide all movements of CF personnel to ensure that areas of concern are avoided. Other equipment used will include komatik, MOSV trailer, ice auger, chainsaw, radio and camp stove.

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NUNAVUT WATER BOARD
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OFFICE DES EAUX DU NUNAVUT

EXPLORATION/ REMOTE CAMP SUPPLEMENTARY QUESTIONNAIRE

Applicant: _____ **Licence No:** _____
(For NWB Use Only)

ADMINISTRATIVE INFORMATION

1. Environment Manager: **Eric Trepanier, Director Land Environment, Chief of Land Staff, Department of National Defence** Tel: **819-997-2766** Fax: **819-997-2777** E-mail:**Eric.Trepanier@forces.gc.ca**

2. Project Manager: **Field Supervisor: Captain Christopher Nobrega** Tel: **613-392-2811 ext 7421** Fax: **613-965-7420** E-mail: **Nobrega.ca@forces.gc.ca**

3. Does the applicant hold the necessary property rights?

An INAC Class B Land Use Permit (N2007J0044) was obtained in 2008 and will continue to be valid for this iteration of the course. An application for accessing Inuit Owned Lands has been sent to the Qikiqtani Inuit Association.

4. Is the applicant an 'operator' for another company (i.e., the holder of the property rights)? If so, please provide letter of authorization. **No**

5. Duration of the Project

☐ One year or less Start and completion dates: _____
☒ Multi Year:

If Multi-Year indicate proposed schedule of on site activities
Start: **March 2008** Completion: **March 2014**

CAMP CLASSIFICATION

6. Type of Camp

☐ Mobile (self-propelled)
☒ Temporary
☐ Seasonally Occupied: _____
☐ Permanent
☐ Other: _____

7. What is the design, maximum and expected average population of the camp?

The course will involve a maximum of 54 personnel including 36 candidates, 9 course staff and 9 local Canadian Rangers.

Candidates will be split into 4 Sections with an instructor/candidate ratio of 1 to 9. Two (2) Canadian Rangers will be assigned to each Section. Remaining staff (6) will operate the Headquarters facility in Resolute Bay and provide supplies to the base camp and patrol camps as necessary.

The thirteen (13)-day field training, scheduled for 6 – 18 March 2009 will be divided into 2 parts:

Part A – Survival Training (6 – 9 March 2009): A survival training area will be established in the vicinity of Resolute Bay, Nunavut. During this period candidates will construct and operate out of snow shelters. Sections will deploy daily to perform various survival training tasks in the area. Fuel, water and other supplies will be brought in daily from the community of Resolute Bay via medium oversnow vehicle (MOSV; BV-206) or light oversnow vehicle (LOSV; skidoo) with attached komatik.

Field Training Part B - Patrol Phase (10 – 18 March 2009): A platoon-sized mock sovereignty patrol will be conducted. The course will deploy from the community of Resolute Bay and manoeuvre to the Polaris Mine site on Little Cornwallis Island. Should the site on Little Cornwallis Island prove to be unusable the course will manoeuvre to Sophia Cove on Devon Island. Field training will be supported from various camps that will be established in different locations every 1 – 2 days. Kenn Borek Airlines will be hired to provide re-supply to the camps by air.

8. Provide history of the site if it has been used in the past.

Existing infrastructure, operated by Natural Resources Canada as part of the Polar Continental Shelf Project (PCSP) will be used to provide accommodation, feeding, storage, fueling and repair functions during hard stand.

CAMP LOCATION

9. Please describe proposed camp location in relation to biogeographical and geomorphological features, and water bodies.

***A CD containing maps of camp locations is included within the application package.**

Field Training Part A - Skills Phase: A survival training area consisting of snow shelters and snow caves will be erected to accommodate a maximum of 54 personnel for a period of 4 days. The survival training area will be located on Cornwallis Island to the North-West of the community of Resolute Bay (see map 1). Sections will deploy daily from this location to perform various skill tasks in the area.

Field Training Part B - Patrol Phase: The mock Sovereignty Patrol will see the course manoeuvre from the survival training area to either the Polaris Mine site on Little Cornwallis Island (see map 2) or to Sophia Cove on Devon Island (see map 3). Field training will be supported from various camps that will be established in different locations every 1-2 days. The coordinates for the Polaris Mine site are (N75° 23' 14.3'' W096° 55' 41.9'') the coordinates for the Sophia Cove site are (N75° 7' 25.5'' W090° 47' 30.1'')

10. How was the location of the camp selected? Was the site previously used? Was assistance from the Regional Inuit Association Land Manager sought? Include maps and/or aerial photographs.

With the anticipated establishment of an Arctic Warfare Training Centre (AWTC) in Resolute Bay, Nunavut, the Canadian Forces have selected Cornwallis Island as the ideal location to conduct the Advanced Winter Warfare Course.

11. Is the camp or any aspect of the project located on:

☒	Crown Lands	Permit Number (s)/Expiry Date: N2007J0044
☐	Commissioners Lands	Permit Number (s)/Expiry Date:
☒	Inuit Owned Lands	Permit Number (s)/Expiry Date: Pending

12. Closest Communities (direction and distance in km):

Resolute Bay (see map 1)

13. Has the proponent notified and consulted the nearby communities and potentially interested parties about the proposed work?

Tactical reconnaissance missions were conducted in Resolute Bay, where consultations regarding the AWWC were held with Federal Authorities, including Indian and Northern Affairs Canada (INAC) and Natural Resources Canada (NRCan), territorial and municipal governments, Aboriginal groups, the public and other interested parties.

14. Will the project have impacts on traditional water use areas used by the nearby communities? Will the project have impacts on local fish and wildlife habitats?

No.

PURPOSE OF THE CAMP

15.
- ☐ Mining (includes exploration drilling)
- ☐ Tourism (hunting, fishing, wildlife observation, adventure/expedition, etc.) (Omit questions # 16 to 21)
- ☒ Other **Canadian Forces Individual Training Exercise**

16. Activities (check all applicable)

- ☐ Preliminary site visit
- ☐ Prospecting
- ☐ Geological mapping
- ☐ Geophysical survey
- ☐ Diamond drilling
- ☐ Reverse circulation drilling
- ☐ Evaluation Drilling/Bulk Sampling (also complete separate questionnaire)
- ☒ Other: **See attached project description**

17. Type of deposit (exploration focus):

- ☐ Lead Zinc
- ☐ Diamond
- ☐ Gold
- ☐ Uranium
- ☐ Other: _____

DRILLING INFORMATION

18. Drilling Activities

- ☐ Land Based drilling
- ☐ Drilling on ice

19. Describe what will be done with drill cuttings?

N/A

20. Describe what will be done with drill water?

N/A

21. List the brand names and constituents of the drill additives to be used? Includes MSDS sheets and provide confirmation that the additives are non-toxic and biodegradable.
N/A

22. Will any core testing be done on site? Describe.

N/A

SPILL CONTINGENCY PLANNING

23. The proponent is required to have a site specific Spill Contingency Plan prepared and submitted with the application This Plan should be prepared in accordance with the *NWT Environmental Protection Act, Spill Contingency Planning and Reporting Regulations, July 22, 1998* and *A Guide to the Spill Contingency Planning and Reporting Regulations, June 2002*. Please include for review.

Fuel transfer during field training will be conducted by jerry can, over drip trays and/or appropriate absorbent material. Standard Canadian Forces fuel spill kits will be carried both in the BV-206s and at the Section-level (i.e. one spill kit per 9 candidates 1 instructor and 2 Canadian Rangers), and all existing spill Standard Operating procedures will be employed as necessary. Any contaminated snow will be collected in bags and removed. All fuel will be drawn from community supply facilities.

24. How many spill kits will be on site and where will they be located?

Four (4) large emergency spill kits will be kept (2 at the forward base and 2 with the supply). Each kit contains a spill instruction sheet; one 36"x36" neoprene drain cover; one epoxy stick; one roll of duct tape; two absorbent packs – stock number CN-ESK-01 (which contain: 5-17"x19" laminated polypropylene absorbent pads; 1-4L bag multizorb universal absorbent; 1-10' polypropylene sock for oil only; 1-4' polypropylene sock for oil only; 2 disposal sacks and crossties; 2 adhesive caution labels and 1 pair of nitrile gloves).

A smaller emergency spill kits will be stored at the Section-Level.

25. Please describe the types, quantities, and method of storage of fuel and chemicals on site, and provide MSDS sheets.

All fuel required for the training will be drawn from the community supply facilities and will be transported to the camps in 20L jerry cans. Jerry cans will be secured within either BV-206s or to trail boggan/komatiks towed by skidoos. Materials used/stored on site: Diesel fuel (BV-206 tank capacity 120L plus one emergency supply per vehicle); Gasoline (Skidoo tank capacity 20L plus one emergency supply per vehicle); Naphtha (approximately 40L per day used for stoves – stored in 1L bottles).

WATER SUPPLY AND TREATMENT

26. Describe the location of water sources.

All potable water will be drawn from the community of Resolute Bay in the form of ice blocks. No water will be taken from a water body.

27. Estimated water use (in cubic metres/day):

☒ Domestic Use: **0.5 cubic metres/day** Water Source: **Ice blocks**
☐ Drilling: _____ Water Source: _____
☐ Other: _____ Water Source: _____

28. Describe water intake for camp operations? Is the water intake equipped with a mesh screen to prevent entrapment of fish? (see *DFO 1995, Freshwater Intake End-of-Pipe Fish Screen Guideline*) Describe:

N/A

29. Will drinking water quality be monitored? What parameters will be analyzed and at what frequency?

All potable water will be drawn from the community of Resolute Bay.

30. Will drinking water be treated? How?

All potable water will be drawn from the community of Resolute Bay.

31. Will water be stored on site?

All potable water will be drawn from the community of Resolute Bay. Canadian Forces personnel will supply the survival training camp with ice blocks on a daily basis or as required. Approximately 5 to 6 ice blocks will be used per tent per day. For the patrol camps, Canadian Forces supply personnel will store required ice blocks in the BV-206 vehicles.

Contaminated water will be stored in bags and returned to Resolute Bay with the supply personnel.

WASTE TREATMENT AND DISPOSAL

32. Describe the characteristics, quantities, treatment and disposal methods for:

☒ Camp Sewage (blackwater)

Sewage: **Approximately 500L (0.5 cubic meters) of water consumed per day for personal hydration and cooking. All sewage and contaminated water resulting from that consumption will be contained in bags and returned to Resolute Bay.**

☐ Camp Greywater

☒ Solid Waste

Solid Waste: Type of solid waste expected - food storage containers. All solid waste will be stored in bags and returned to Resolute Bay.

☐ Bulky Items/Scrap Metal

☐ Waste Oil/Hazardous Waste

☐ Empty Barrels/Fuel Drums

☐ Other:

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33. Please describe incineration system if used on site. What types of wastes will be incinerated?

No on-site incineration

34. Where and how will non-combustible waste be disposed of? If in a municipality in Nunavut, has authorization been granted?

While conducting field training away from the community of Resolute Bay, all garbage (including human waste) will be collected in bags and redeployed to the community of Resolute Bay. Waste will subsequently be redeployed, with the course, to Trenton, ON for disposal. Any remaining fuels or unused hazardous materials drawn from the community will be returned as appropriate.

35. Describe location (relative to water bodies and camp facilities) dimensions and volume, and freeboard for all sumps (if applicable).

N/A

36. Will leachate monitoring be done? What parameters will be sampled and analyzed, and at what frequency?

N/A

OPERATION AND MAINTENANCE

37. Have the water supply and waste treatment and disposal methods been used and proven in cold climate? What known O&M problems may occur? What contingency plans are in place?

The water supply and waste disposal methods were proven during the 2008 iteration of the course which was conducted in the same region. No O&M problems were encountered.

ABANDONMENT AND RESTORATION

38. Provide a detailed description of progressive and final abandonment and restoration activities at the site.

All camp locations will be restored to their previous state upon departure. All waste will be removed and improvised structures dismantled.

BASELINE DATA

39. Has or will any baseline information be collected as part of this project? Provide bibliography.

- ☐ Physical Environment (Landscape and Terrain, Air, Water, etc.)
- ☐ Biological Environment (Vegetation, Wildlife, Birds, Fish and Other Aquatic Organisms, etc.)
- ☐ Socio-Economic Environment (Archaeology, Land and Resources Use,
- ☐ Demographics, Social and Culture Patterns, etc.)
- ☐ Other: _____

REGULATORY INFORMATION

40. At a minimum, you should ensure you have a copy of and consult the documents below for compliance with existing regulatory requirements:

- ✓ ARTICLE 13 – *NCLA -Nunavut Land Claims Agreement*
- ✓ NWNSRTA – *The Nunavut Waters and Nunavut Surface Rights Tribunal Act, 2002*
- ✓ *Northwest Territories Waters Regulations, 1993*
- ✓ NWB - Water Licensing in Nunavut - Interim Procedures and Information Guide for Applicants
- ✓ NWB - Interim Rules of Practice and Procedure for Public Hearings
- ✓ RWED – *Environmental Protection Act, R-068-93- Spill Contingency Planning and Reporting Regulations, 1993*
- ✓ RWED A Guide to the Spill Contingency Planning and Reporting Regulations, 2002
- ✓ NWTWB - Guidelines for Contingency Planning
- ✓ *Canadian Environmental Protection Act, 1999 (CEPA)*
- ✓ *Fisheries Act, RS 1985* - s.34, 35, 36 and 37
- ✓ DFO - Freshwater Intake End of Pipe Fish Screen Guideline
- ✓ NWTWB - Guidelines for the Discharge of Treated Municipal Wastewater in the NWT
- ✓ Canadian Council for Ministers of the Environment (CCME); Canadian Drinking Water Quality Guidelines, 1987
- ✓ Public Health Act - Camp Sanitation Regulations
- ✓ Public Health Act - Water Supply Regulations
- ✓ *Territorial Lands Act* and *Territorial Land Use Regulations*; Updated 2000