

SCIENTIFIC RESEARCH LICENCE APPLICATION LAND, FRESHWATER & MARINE BASED RESEARCH

NRI strongly recommends that applicants review the following documents prior to submitting an application: *Scientific Research Licencing Guidelines* and *Negotiating Research Relationships in Inuit Communities: A Guide for Researchers*.

For more information about the Nunavut Research Institute (NRI) please visit our web site www.nri.nu.ca

IMPORTANT

This application fulfills the requirements for the NIRB environmental screening. Please be advised that your application will not be processed until the application form, project summary, and maps are received.

SECTION 1: APPLICANT INFORMATION

1a. Project Title Airborne Observations in Support of NETCARE (NETwork on Climate and Aerosols: Addressing Key Uncertainties in Remote Canadian Environments)

1b. Project Number

Please indicate if applicant has submitted any previous application(s) to NRI related to this project proposal? Yes _____ No **x** _____
If yes, please indicate the previous NRI licence number: _____

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If yes, please indicate the previous NIRB project number(s): _____

2. Applicant's full name and mailing address:
W. Richard Leitch Phone: 416-739-4616
Environment Canada (CCMR/CRD/ASTD/STB) Fax: _____
4905 Dufferin Street, Toronto, Ontario M3H 5T4 Email: Richard.Leitch@ec.gc.ca

3. Field Supervisor's name and mailing address:
Carrie Taylor, Manager CCMR Phone: 416-739-4433
Environment Canada (CCMR/CRD/ASTD/STB) Fax: _____
4905 Dufferin Street, Toronto, Ontario M3H 5T4 Email: _____

4. Other Personnel list (name, position, affiliation)
See attached list. _____

SECTION 2: AUTHORIZATION NEEDED

1. Indicate all authorizations associated with the project proposal:

Regional Inuit Association (RIA)

Nunavut Water Board (NWB)

- Nunavut Planning Commission (NPC)
- Department of Indian And Northern Development (DIAND)
- Department of Fisheries and Oceans (DFO)
- Community Government & Services (CG&S)
- Nunavut Research Institute (NRI/GN)
- Department of Culture, Language, Elders, and Youth (CLEY/GN)
- Canadian Launch Safety (CLS)

- Environment Canada (EC)
- Department of Environment (GN)
- Department of National Defense (DND)
- Hamlet
- Parks Canada (PC)
- Canadian Wildlife Service (CWS)
- Other (please specify):

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

Scientific Research Licence # 02 026 13N-M, issued to Marjorie Shepherd, covers activities that will contribute to activities of the present application.

3. Have you applied for all authorizations required to conduct the project proposal activities?

YES

NO

SECTION 3: PROJECT PROPOSAL DESCRIPTION

1. Indicate the activities related to the project proposal:

- Temporary camp (to be removed at end of field season)
- Permanent camp (to remain for life of authorization)
- Construction of recreational or safety cabin
- Temporary fuel storage (to be removed at end of field season)
- Permanent fuel storage (to remain for life of authorization)
- Placement of structures for life of permit (other than camp or cabin – i.e. scientific instruments)
- Placement of permanent structures (other than camp or cabin – i.e. scientific instruments)
- Air surveys (i.e. geophysical, wildlife)
- Use of aircraft/watercraft/land vehicle for personnel drop-off and pick-up to project location
- Use of on-site mechanized vehicles (i.e. atv, snowmobile, truck, zodiac)
- Sewage or grey water disposal via sump
- Hazardous waste storage or disposal
- Solid waste disposal
- Chemical storage
- Explosives storage
- Soil testing

- Soil disposal/ soil storage
- Incineration of combustible wastes and removal of non-combustible wastes
- River/ stream/ lake crossing or work/ bridge
- Drainage alteration
- Geoscientific sampling by diamond drilling
- Geoscientific sampling by soil sampling
- Geoscientific sampling by trenching
- Geoscientific sampling by borehole core
- Blasting
- Channeling
- Excavation
- Hydrological testing
- Abandonment and restoration
- Site restoration (fertilization/ grubbing/ scarification/ spraying/ recontouring)
- Research
- Ecological survey
- Harvesting
- Removal of vegetation for scientific purposes
- Other:

2. Personnel

Total No. of personnel on site = (A)	24	Total No. of days on-site = (B)	9-24	Total No. of Person days (A) x (B) = 400
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3. Timing

Period of operation: **June 30, 2014** to **July 24, 2014**

Proposed term of
authorization:

Same as period of operation

to

Please outline the phases of the proposed project (construction/ operation/ decommissioning) including the timing and scheduling of each phase.

A number of the project participants will arrive on June 30 to prepare for the arrival of the POLAR 6 (DC3) aircraft on July 1. Several people will arrive on also on July 1 and 2, with a few others to arrive later during the study. All personnel will stay at the Polar Continental Shelf facilities in Resolute Bay. The project will entail conducting flights from Resolute Bay approximately 5 days a week starting July 2 and concluding July 23. The flights will be coordinated with the CCGS Amundsen during its first Arctic cruise of 2014, and a few flights may be done between Resolute Bay and either Pond Inlet or Nanisivik in order to maximize flight time in the vicinity of the Amundsen.

4. Location(s) of data collection:

Location Name	Region North Baffin, South Baffin, Kivalliq, Kitikmeot	Co-ordinates Lat (degree / minute), Long (degree / minute)	NTS Map Sheet #	Land Status Crown, Commissioners', Inuit Owned
Resolute Bay	Within 300 km of Resolute Bay			
Pond Inlet	Within 300 km of Pond Inlet			
Nanisivik	Within 300 km of Nanisivik			

If the project proposal includes a **camp**, please provide the coordinates of the camp location

Lat (degree/minute)

Long (degree/minute)

NTS Map Sheet # (if different from above)

The Nunavut Impact Review Board may require additional location information in a subsequent Project Specific Information Requirement (PSIR) submission. This may take the form of a digital Geographic Information Systems (GIS) file.

SECTION 4: NON-TECHNICAL PROJECT PROPOSAL DESCRIPTION

Please attach a non-technical description of the project proposal, no more than 500 words, in English and Inuktitut (+Inuinnaqtun, if in the Kitikmeot). The project description should outline the following:

- Project Title
- Researcher's Name and Affiliation
- Project Location
- Timeframe
- Project Description
 - purpose
 - goals & objectives
 - method of transportation
 - any structures that will be erected (permanent / temporary)
 - restoration / abandonment plans

- Methodology
 - collection protocol
 - collection mechanisms
 - indicate why specific communities or individuals were selected for your research
- Data
 - short term & long term use of data
 - other uses of data
- Reporting
 - How will the research results be communicated to the individual participants, communities, regional and Nunavut organizations?
 - Will the research result in a publication?

SECTION 5: MATERIAL USE

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

Equipment type and number	Size – dimensions	Proposed use
DC3 Aircraft		Platform for research flights in region around Resolute Bay

2. Detail fuel and hazardous material use:

Fuel	Number of Containers and Capacity of Containers	Total Amount of Fuel (in Litres)	Proposed Storage Methods
Diesel			
Gasoline			
Aviation fuel		38,000	
Propane			
Other			
Hazardous Materials and Chemicals		Total Amount of Hazardous Materials and Chemicals (in Litres)	
1-Butanol	2	2	Butanol to be stored in hangar; All unused and waste butanol will be removed and returned to Toronto following the study completion.

3. Detail daily water consumption rates

Daily amount (in Litres)	Proposed water retrieval methods	Proposed water retrieval location

4. Have you applied for a Class A License with the Nunavut Water Board?

YES

NO

SECTION 6: WASTE DISPOSAL AND TREATMENT METHODS

1. List the types of waste:

Type of waste	Projected amount generated	Method of Disposal	Additional treatment procedures
Sewage (human waste)			
Greywater			
Combustible wastes			
Non-Combustible wastes			
Overburden (organic soil, waste material, tailings)			
Hazardous waste	1 litre of 1-butanol	Transported back to Toronto for disposal	
Other:			

2. Will you be incinerating combustible waste, removing all solid waste, and removing the ash generated from incineration?

YES

NO

SECTION 7: COMMUNITY INVOLVEMENT & REGIONAL BENEFITS

1. List the community representatives that have been contacted and provide the minutes of the meetings if available:

Community	Name	Organization	Date Contacted

2. How will the proposed project benefit Nunavut?

This multidisciplinary project will combine national and international university and government institutions to contribute to an improved understanding and modelling of air quality and climate issues in the Arctic. The results will be disseminated through publication in the open literature. In addition, we propose to conduct an open information session while in Resolute Bay to outline the project's objectives and activities.

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

5. Is there a traditional knowledge component to this research project? If yes, please explain:

No.

SECTION 8: GENERAL QUESTIONS

1. Do you give NRI permission to publish project information in the Nunavut Research Institute Annual Compendium of Research Undertaken in Nunavut?

YES

NO

3. In addition to the application form, applicants are required to submit additional information in an electronic format to the Manager, Research Liaison, cfilion@nac.nu.ca. Please check that the following have been submitted to NRI:

- Project Summary** -in English and Inuktitut (+Inuinnaqtun, if in the Kitikmeot)
- NTS Maps** of the project

Applicant:

Signature

Title

Date