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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

EXPLORATION/ REMOTE CAMP SUPPLEMENTARY QUESTIONNAIRE

Applicant: ___Keith Dewing_____Licence No: _____
(For NWB Use Only)

ADMINISTRATIVE INFORMATION

1. Environment Manager Keith Dewing Tel: 403-292-7135 Fax: 403-292-4961

   E-mail: kdewing@NRCan.gc.ca

2. Project Manager: Keith Dewing Tel: 403-292-7135 Fax: 403-292-4961

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3. Does the applicant hold the necessary property rights?

   Yes, this is crown land and the camp is small enough that it falls below the INAC requirement for a land use permit.

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: June 25 2011 – Aug 01 2011
   ☐ Multi Year:

   If Multi-Year indicate proposed schedule of on site activities

   Start: _____ Completion:_____

   Anticipatory Schedule of Activities on site for the 2011 Field Seasons

   1st July – Establish the temporary field camp, bring in supplies and camp equipment. Arrival of researchers will also be scheduled around this time.

   3 July – 30 July – Conduct research within the area and general running of the camp facilities. Water uses would involve taking water for common camp needs (cooking, washing, drinking,

showers). Disposal of grey water in an appropriately placed sump. One flight into and out of each field camp will deliver camp supplies and personnel and remove waste (non-combustible materials) and personnel.

End of the Field Season (July 25 2011) – The temporary camp is to be demobilized and all equipment, waste to be removed leaving the camp in the same condition as we arrived.

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?

A temporary summer field camp will be setup consisting of one (1) 12x14' tents, up to 4 dome tents. The maximum population will be 5 people for a total of 35 person days in one camp, 10 person days in the other two camps. The camp will be set-up to minimize its environmental footprint, while still being able to support a suitable work and living space. The camp accommodations will not be setup long enough during the field season to cause any serious harm to the underlying vegetation, lichen and moss cover.

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

None.

CAMP LOCATION

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

Much of the area of interest consists of a low terrain composed from sedimentary rocks with rivers draining the interiors becoming braided at the low coasts and some eroded upland areas.

The proposed camps will be located on a sandy plain about 100m from a small, unnamed creeks. The plain is nearly flat and as with much of the Canadian Arctic islands it has extremely low plant diversity and sparse areas of vegetation.

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.

The location of the camp was selected to be close to the rocks we wish to investigate, and accessible by aircraft. We used maps, satellite images, and the recollection of scientists who have visited the site before.

Since the island does not contain Inuit Owned Lands no assistance was sought in scouting out and selecting the location.

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

☒	Crown Lands	Permit Number (s)/Expiry Date: In Process
☐	Commissioners Lands	Permit Number (s)/Expiry Date:_____
☐	Inuit Owned Lands	Permit Number (s)/Expiry Date: _____

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

Glacier Fiord is 450 km north of Resolute Bay and 300 km northwest of Grise Fiord. There are no communities on the island. The camps near Eureka are about 350 km north of Grise Fiord.

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

Yes, this project is affiliated with the Canada-Nunavut Geoscience Office in Iqaluit, that has been providing information to communities in Nunavut about all the Geological Survey of Canada projects for the coming year, including this one.

14. Will the project have impacts on traditional water use areas used by the nearby communities?

No, there are no nearby communities and the amount of water use and grey water disposal is considered to be minimal.

Will the project have impacts on local fish and wildlife habitats?

No, only water for camp use will be taken and grey water will be properly disposed of in a properly placed sump to allow proper filtration. Additonally, the camp consists of accommodations that do not have a significant footprint on the area as well all fuel will be properly stored according to best practices developed and secondary berms and spill kits are also in place.

PURPOSE OF THE CAMP

15.
- ☐ Mining (includes exploration drilling)
- ☐ Tourism (hunting, fishing, wildlife observation, adventure/expedition, etc.) (Omit questions # 16 to 21)
- ☒ Other __Scientific research_____

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: _____

17. Type of deposit (exploration focus):
    - ☐ Lead Zinc
    - ☐ Diamond
    - ☐ Gold
    - ☐ Uranium
    - ☐ Other: _____

DRILLING INFORMATION

18. Drilling Activities

    ☐ Land Based drilling
    ☐ Drilling on ice

    Not applicable. The purpose of this project is to update our understanding of the geology and hydrocarbon potential of Ellef Ringnes Island. The island was last mapped in 1967. A detailed geological map of the island will be produced.

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.

There will be no fuel on site besides propane and a small contain of white gas.

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

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

Diesel 0 gal. .
Aviation fuel 0 L. 0.
Propane 1 x 20lb tank = 20lbs. Stored in well ventilated area with berms and an approved fire extinguisher.

WATER SUPPLY AND TREATMENT

26. Describe the location of water sources.

The water source will be a small, unnamed creek that drains just to the south of the Malloch airstrip.

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

☒	Domestic Use: ~0.3 m3/day	Water Source: Unamed Creek
☐	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:

The water will be collected by hand using buckets. The water will be collected from the same area of the river that is easily accessible and devoid of fish populations and habitats. All buckets are inspected after filling to ensure no fish or other freshwater life were accidently captured. In the event that any is the water will be placed back into the creek and a new bucket taken.

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

No, only visual inspection of the water quality will be made.

30. Will drinking water be treated? How?

Water used in cooking will be treated by boiling as needed for the preparation of food. Standard drinking water will not be treated, only monitored for quality.

31. Will water be stored on site?

A small amount of water (<10 l) will be stored on the site at any time for basic water use.

WASTE TREATMENT AND DISPOSAL

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

☒ Camp Sewage (blackwater)

Absolutely no sewage will be left at the camp facility, human waste will be captured in a contained latrine and flown out of the camp location.

☒ Camp Greywater

Grey water will be disposed of in an appropriately place sump that allows proper natural filtration of the grey water. Any solid particles associated with the grey water (e.g. remnants from washing dishes) will be collected from the sump and properly incinerated. All ash and non-combustable materials will be collected and flown out of the camp location for proper disposal.

☒ Solid Waste

Solid waste will be gathered, removed from the camp facilites and properly disposed of in an approved landfill site.

☐ Bulky Items/Scrap Metal

None expected.

☐ Waste Oil/Hazardous Waste

None expected

☐ 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?

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

All non-combustible materials will be will be removed from the camp facilites and flown back to the Polar Continental Shelf Program's base in Resolute Bay. From there the non-combustable materials will be propertly disposed of in the Resolute Bay landfill.

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

The only sump will be located to minimize any potential contamination of the nearby creek. The sump will be placed (at a minimum) 200m from the creek and approximately 100m from camp. The sump dimensions will be approximately 0.3m square and 0.3m deep, lined with gravel.

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

Given the small amount of grey water produced, the nature and source of the grey water (washing, dishes, etc…) and the location of the sump relative to the surrounding water source, there is no need to monitor leachate, as the grey water will not contain any notable contaminants and the sandy nature of the area allows for good filtering of the grey water.

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?

Water quality in the Arctic Islands in the summer remains a concern. High dissolved solids, leaching from the exposed salt domes and from the shale can affect the water quality in some creeks. In the event that the water in the creeks indicates the useability of the water is compromised, we may opt to obtain fresh water from melting ice. .

We do not expect issues with treating grey water via sump filtration due to the small volumes. However, in the event that we have problems, we are prepared to fly out any waste that can not be properly disposed of.

ABANDONMENT AND RESTORATION

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

All aspects of this field camp are designed to be temporarly and minimize the environmental footprint from both the camp facilites and researchers. At the end of the field season the camp will be demobilized and all evidence of our presence removed from the site. Our aim to leave the site in the same condition from which we found it.

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: Soil samples may be collected from the site to establish a baseline of the site conditions prior to our use.

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