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NUNAVUT WATER BOARD  
NUNAVUT IMALIRIYIN KATIMAYINGI  
OFFICE DES EAUX DU NUNAVUT

## EXPLORATION/ REMOTE CAMP SUPPLEMENTARY QUESTIONNAIRE

**Applicant:** Dr. Ray T. Alisauskas

**Licence No:** amendment to NWB license 3BC-KAR0812

(For NWB Use Only)

### ADMINISTRATIVE INFORMATION

1. Environment Manager: Dana Kellett (wildlife technician) Tel: 306.975.5509 Fax: 306.975.4089 E-mail: dana.kellett@ec.gc.ca
2. Project Manager: Dr. Ray Alisauskas (research scientist) Tel: 306.975.4556 Fax: 306.975.4089 E-mail: ray.alisauskas@ec.gc.ca
3. Does the applicant hold the necessary property rights?  
Current INAC Land Use permit valid until 11 June 2010; request for renewal and amendment will be submitted in January 2010.
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: ongoing to 31 August 2015  
☒ Multi Year:

If Multi-Year indicate proposed schedule of on site activities

Start: 1 May      Completion: 31 August

The main camp at Karrak Lake is generally occupied by 4-10 people for the duration of 10 May to 15 August. The proposed secondary camp (F-14) located 15 km north-west of the main camp will be occupied by 2-6 people sporadically, but for no more than two weeks in total, during the months of June and July.

### CAMP CLASSIFICATION

6. Type of Camp

- ☐ Mobile (self-propelled)  
☐ Temporary  
☒ Seasonally Occupied: 1 May to 31 August, or portions thereof

- ☐ Permanent  
☐ Other: \_\_\_\_\_

7. What is the design, maximum and expected average population of the camp?  
The main camp at Karrak Lake consists of 5 plywood cabins varying in size from 8x12' to 20x20'. It is occupied by 4-10 personnel during the time period of 10 May to 15 August, for an average of 550 person days annually. In the past, it has housed a maximum of 20 folks for 10 days in June, but this is a very unlikely scenario in the foreseeable future.  
The proposed secondary camp (F-14) located 15 km north-west of Karrak Lake camp will consist of one 12x16 plywood cabin, and be occupied sporadically by 2-6 personnel for no more than two weeks in total during June-July.
8. Provide history of the site if it has been used in the past.  
The Karrak Lake Camp was established in 1991, and has been used seasonally (May to August) every year since its inception.

## CAMP LOCATION

9. Please describe proposed camp location in relation to biogeographical and geomorphological features, and water bodies.  
The existing Karrak Lake Camp is located at 67° 14' 13" N and 100° 15' 30" W, on the largest island of Karrak Lake. It is situated on bedrock about 100 m from the nearest high water mark. The proposed F-14 Camp will be located at 67° 21' 9" N and 100° 20' 59" W, on the west side of the outflow drainage (dubbed North Karrak River) of Karrak Lake, at least 100 m from the nearest high water mark. The substrate at this location is well-drained upland consisting of bedrock and cobble, with minimal 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.  
In 1991, the location of the Karrak Lake Camp was selected due to its central location in the Lesser Snow and Ross's colony, the main species of study. As the colony shifts in distribution to the north-west, many areas of the colony are becoming increasingly difficult to reach by foot from Karrak Lake Camp, which is now located in the south-east region of the colony. The location of close proximity to the river of the proposed F-14 Camp permits access to good water for domestic use, and importantly, facilitates visitation to regions of the colony more easily accessible by foot.
11. Is the camp or any aspect of the project located on:

☒ Crown Lands Permit Number (s)/Expiry Date: INAC Land Use Permit N2008N0028, expires 11 June 2010, request for amendment/renewal submitted January 2010 \_\_\_\_\_  
☐ Commissioners Lands Permit Number (s)/Expiry Date: \_\_\_\_\_  
☐ Inuit Owned Lands Permit Number (s)/Expiry Date: \_\_\_\_\_

12. Closest Communities (direction and distance in km):  
Gjoa Haven, Nunavut. 250 km south-west  
Cambridge Bay, Nunavut. 280 km south-east
13. Has the proponent notified and consulted the nearby communities and potentially interested parties about the proposed work?  
HTOs in both Cambridge Bay and Gjoa Haven have been consulted in the past, and posters disseminating research results have been distributed. For the 2010 field season, we hope to hire at least one assistant from either Cambridge Bay or Gjoa Haven.
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. Impacts on water, fish, and wildlife habitats will be minimal, and the proposed sites are located far from the above-mentioned communities.

## PURPOSE OF THE CAMP

15. ☐ Mining (includes exploration drilling)  
☐ Tourism (hunting, fishing, wildlife observation, adventure/expedition, etc.)  
(Omit questions # 16 to 21)  
☒ Other \_wildlife 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: \_\_observation of wildlife, measuring eggs, etc. \_\_\_\_\_
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?

### 20. Describe what will be done with drill water?

### 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.

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

## 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. See attached.

### 24. How many spill kits will be on site and where will they be located? One spill kit is located at Karrak Lake Camp. It is marked as such, and located in the Equipment Cabin.

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

At Karrak Lake Camp:

Up to 10,000 L jet b, stored in 200 L steel drums.

Up to 2,000 L gasoline, stored in 200 L steel drums.

Up to 200 L naphtha, stored in a 200 L steel drum.

Up to 600 lbs propane, stored in 100 lb steel cylinders.

At F-14 Camp:

Small quantities (up to 20 L) of naphtha, stored in plastic jerry cans.

## WATER SUPPLY AND TREATMENT

26. Describe the location of water sources.

At Karrak Lake Camp: Karrak Lake, shoreline located about 100 m south of the main cabin.

At F-16 Camp: North Karrak River, shoreline located 100-200 m east of the cabin.

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

☒ Domestic Use: Karrak Lake Camp: less than 0.2 cubic meters per day  
Water Source: \_\_Karrak Lake\_\_

☒ Domestic Use: F-14 Camp: less than 0.1 cubic meters per day  
Water Source: \_\_North Karrak River\_\_

☐ 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:

At Karrak Lake Camp, water is pumped with a small gas-operated water pump to a 175 L holding tank near the main cabin. The intake end of the hose is equipped with a mesh screen to prevent intake of fish and other debris.

At F-14 Camp, water will be manually acquired from the river and stored in plastic 20 L water jugs.

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

No monitoring has been done in the past.

30. Will drinking water be treated? How?  
Drinking water is treated with household chlorine bleach.

31. Will water be stored on site?  
Yes. At Karrak Lake Camp, water is stored in a plastic 175 L holding tank located near the main cabin. At F-14 Camp, water will be stored in plastic 20 L water containers.

## WASTE TREATMENT AND DISPOSAL

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

The following applies to both Karrak Lake Camp and F-14 Camp:

☐ Camp Sewage (blackwater) Sewage, organic food waste ('compost'), and ash from burning barrels (see below) is buried in pits located at least 100 m from the nearest high water mark; less than 0.1 m<sup>3</sup> per day.

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☐ Camp Greywater At both camps, greywater will be leached into soil at a minimum distance of 100 m from the nearest high water mark; less than 0.2 m<sup>3</sup> per day.

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☐ Solid Waste All burnable solid waste will be incinerated in a 45 gallon burning barrel; less than 0.2 m<sup>3</sup> per day. Ash from burning barrels will be buried with sewage, as noted above.

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☐ Bulky Items/Scrap Metal Metal, glass, and other non-burnable inorganic waste will be shipped to Cambridge Bay for disposal; less than 0.1 m<sup>3</sup> per day.

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☐ Waste Oil/Hazardous Waste If combustible, incinerated in burning barrels; less than 0.01 m<sup>3</sup> per day. Non-combustible hazardous waste will be shipped to Cambridge Bay for proper disposal, although we have yet to have to do this.

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☐ Empty Barrels/Fuel Drums Shipped to Cambridge Bay for disposal.

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☐ Other:

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

A 45 gallon drum is used for incineration, aided by the use of waste jet b fuel, if required. See above for types of waste to be incinerated.

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

See above.

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

Not applicable.

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

No.

## **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 supply and disposal at these camps are minimal and simple, and have been used without issue since 1991.

## **ABANDONMENT AND RESTORATION**

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

When all research in the area is complete, the affected land will be returned to its original state, or as near as possible. Likely, most materials will be incinerated, and non-combustable waste shipped to Cambridge Bay for disposal.

## 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.)
- ☐ X Socio-Economic Environment (Archaeology, Land and Resources Use, Demographics, Social and Culture Patterns, etc.)
- ☐ Other: \_\_\_\_\_

The purpose of this application is to permit the conduction of scientific research in the area. As such, data on both the physical and biological environment is collected on an ongoing basis, and results disseminated through scientific publications in reports and peer-reviewed journals. Attached is bibliography to date.

Further, several archeological sites in the region have been filed with relevant authorities. There are no known archeological sites at the existing or proposed camp locations.

## 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*