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# Inuvialuit Projects Inc (2003)

107 Mackenzie Rd, Bag Service #7, Inuvik, NT X0E 0T0  
 Tel: (867) 777-2419 Fax: (867) 777-3256 www.idc.inuvialuit.com

Ms. Vicki Losier  
 Northwest Territories Water Board  
 2<sup>nd</sup> Floor Gogo Cho Building  
 4916 47<sup>th</sup> Street  
 PO Box 1326  
 Yellowknife, NT  
 X1A 2N9

Dear Ms. Losier

Inuvialuit Projects Inc. (2003 ) (IPI) is pleased to submit this application for a water license required August 2004. IPI is conducting a soil remediation project at Kittigazuit, approximately 37 km southwest of Tuktoyaktuk, NT.

Please find enclosed one copy of "Application for License, Amendment of License, or Renewal of License", one copy of "Northwest Territories Water Board Municipal Questionnaire for Water License Application", and one cheque for the amount of \$30.00.

I trust that you will find all the information you require. If you require additional information, please do not hesitate to call David Wells, at (867) 777-7062, or email [dwells@idc.inuvialuit.com](mailto:dwells@idc.inuvialuit.com).

Sincerely,



David Wells, M.A.Sc  
 Acting Manager



Schedule III  
(Subsection 6(1))

APPLICATION FOR LICENCE, AMENDMENT OF LICENCE, OR RENEWAL OF LICENCE

APPLICATION/LICENCE NO:  
(amendment or renewal only)

1. Name and Mailing Address of Applicant

David Wells  
Inuvialuit Projects Inc. (2003)  
107 Mackenzie Road, Bag Service #7, Inuvik, NT, X0E 0T0

2. Address of Head office in Canada if incorporated

Inuvialuit Projects Inc. (2003)  
107 Mackenzie Road, Bag Service #7, Inuvik, NT, X0E 0T0

3. Location of Undertaking (describe and attach a map, indicating watercourses and location of any proposed waste deposits)

Inuvialuit Projects Inc. (2003) (IPI) plans to complete an excavation of hydrocarbon contaminated soil and metal debris at the former LORAN site, Kittigazuit, East Channel, Mackenzie River, NT. The site is located on Inuvialuit private 7(1)(a) lands, approximately 37 kilometres southwest of Tuktoyaktuk.

Latitude 69°16'55.71" N

Longitude 133°54'31.80" W

4. Description of Undertaking (describe and attach plans)

A former air force LORAN station, commonly known as Yellow Beetle and/or Army Camp, is located approximately 37 kilometres southwest of Tuktoyaktuk, NT.

The site was used as a Long Range Aid to Navigation (LORAN) station and was operated by both the Royal Canadian Air Force (RCAF) and the United States Air Force (USAF) from 1947 to 1950. The site was vacant from 1950 until 1976, at which time the Department of Northern Affairs (DIAND) designated the area as a waste metal disposal depot.

In 2002, Indian and Northern Affairs Canada (INAC) entered into a Contribution Agreement with the Inuvialuit Regional Corporation (IRC) for the cleanup of the abandoned Yellow Beetle Army Camp site. The cleanup work was contracted by IRC to Inuvialuit Projects Inc. (IPI), a subsidiary of the Inuvialuit Development Corporation (IDC). IPI is preparing to undertake phase III of a three year remediation plan that was developed for the Kittigazuit site.

In late July IPI will mobilize the NTCL barge camp, equipment, materials and supplies by barge from Inuvik. After arrival at the beach the heavy equipment (966 Loader, D3 Cat with backhoe attachment, and tractor trailer combination) will be unloaded and, if required, the 1.5 kilometer road from the beach to the main station area will be repaired. (Throughout the project, personnel will be transported to and from the site using small crew boats and if necessary, helicopters). Camp operations will conform to all applicable ILA and governmental guidelines. It is expected that water usage will be low as the camp occupancy it is not expected to ever be greater than 15 individuals. Sewage will be treated at the barge camp's treatment plant. The treated effluent will then be discharged back into the Mackenzie River. Onsite excavation and debris cleanup work will commence around August 3 and will be concluded by August 24, 2004. Approximately 120 cubic meters of hydrocarbon contaminated soil will be excavated and containerized in lined wooden seacans. The site will be searched for surface metal debris that will be collected and containerized. Concurrently a geophysical investigation will search the site for subsurface metals debris. The demobilization of IPI's camp, equipment, materials, seacans and supplies by barge to Inuvik will take place on or about August 25, 2004, depending on NTCL's towing schedule for summer 2004.

5. Type of Undertaking

- |                       |       |                |       |                 |       |
|-----------------------|-------|----------------|-------|-----------------|-------|
| 1. Industrial         | _____ | 4. Power       | _____ | 6. Conservation | _____ |
| 2. Mining and milling | _____ | 5. Agriculture | _____ | 7. Recreation   | _____ |
| 3. Municipal          | _____ |                |       |                 |       |

8. Miscellaneous (describe) X - Environmental Remediation (see 4 above)

**6. Water Use**

To obtain water	_____	Flood Control	_____
To cross a watercourse	_____	To divert water	_____
To modify the bed or bank of a watercourse	_____	To alter the flow of, or store, water	_____

Other (describe) X - To discharge treated water

**7. Quantity of Water Involved (litres per second, litres per day or cubic metres per year, including both quantity to be used and quality to be returned to source)**

Water for human consumption, showering, and laundry will be obtained in Inuvik and stored aboard the camp barge. The NTCL 701 / 702 series camp barge has a water storage capacity of 90,500 liters of fresh water. Water use can be estimated based on knowledge of the average per capita water use in camp environments in the north and on expected camp capacity. Approximately 225 liters (60 US gallons) of water is generally used per person, per day in northern camp environments. The camp barge will not be at full capacity, with a maximum of 15 people present per any given time. Conservatively, 225 l/day for 15 people over 21 days is 71 m<sup>3</sup> of expected water use. No additional water will be pumped from the Mackenzie River.

**8. Waste Deposited (quantity, quality, treatment and disposal)**

Approximately 225 liters (60 US gallons) of waste water are generally produced per person, per day in northern camp environments. Sewage will be treated by the Envirovac ORCA 11A-70 sewage treatment system aboard the camp barge. This system can accommodate over 40 people, and thus has extensive capacity for the 15 people at maximum that could be expected to use the camp barge. This wastewater system has been used successfully in the north, and has met all wastewater permitting requirements (Chris Cote, NTCL, email correspondence, April 19, 2004). The ORCA systems are designed specially for rugged marine operating conditions, and operate in the following fashion:

- Raw sewage is macerated and chlorinated in the treatment tank until it is small enough to pass through a retention / reduction screen.
- Sedimentation modules are used to allow suspended solids to settle to the bottom, and then solids are returned to the treatment tank for additional maceration and chlorination.
- Sewage is disinfected via chemical oxidation in the treatment tank, and via a 5% chlorine solution.
- As residual chlorine could be harmful to aquatic life in the nutrient-deficient north, an automatic dechlorination system is used.
- Clean effluent is then discharged overboard.

The total volume of discharged wastewater for 15 people (approximately 3m<sup>3</sup>/day) is indicated below:

- 21 day program = 71m<sup>3</sup> total wastewater over the entire project duration

All solid waste produced will be collected and transported to Inuvik for disposal.

**9. Other Persons or Properties Affected By This Undertaking (give name, mailing address and location; attach list if necessary)**

Nil

**10. Predicted Environmental Impacts of Undertaking and Proposed Mitigation**

Fuel Spills – IPI and its subcontracts (IEG and NTCL) will provide onsite spill response equipment and trained personnel. All fuel will be stored and transferred as per GNWT and Inuvialuit Land Administration (ILA) regulations, such as double wall tanks and secondary containment.

No fuel or hazardous materials will be stored on or near the river bank. All excavated soils will be stored in lined wooden sea containers prior to placement near the river for barge loading. Both IPI and NTCL have comprehensive Environmental Protection Plans (EPP) and an Emergency Response Plans (ERP) complete with spill contingency. All onsite equipment, including the camp barge, will be equipped with emergency spill kits.

In the event that the waste water treatment plant breaks down, the camp barge has adequate storage tanks to accommodate raw sewage until maintenance is completed.

**11. Contractor and Sub-Contractors (names, addresses and functions)**

Northern Transportation Company Ltd., 42003 Mackenzie Highway, Hay River, NT X0E 0R9

IEG Environmental, 1100, 550-11th Ave. SW Calgary, AB T2R 1M7

Proposals have recently been requested from qualified Inuvialuit heavy equipment contractors to conduct the excavation of soil for this project. The approved contractor, as determined from this bidding process, will be forwarded to the NWT Water Board upon project award.

**12. Studies Undertaken to Date (attach list if necessary)**

*Kittigazuit 1998 Site Assessment/Delineation.* 1998. Royal Military College Environmental Sciences Group, Kingston, ON.

*Preliminary Risk Assessment, Kittigazuit, NT.* 1999. Inuvialuit Environmental Inc., Inuvik, NT

*Investigation of DDT Contamination, Kittigazuit, NWT,* 1999. Royal Military College Environmental Sciences Group, Kingston, ON.


*2002 Yellow Beetle Army Base 2002 Clean-up.* 2002. Inuvialuit Environmental & Geotechnical, Calgary, AB

*Yellow Beetle Army Camp Hydrocarbon Delineation 2003.* 2003. IEG Environmental, Calgary, AB

**13. Proposed Time Schedule**

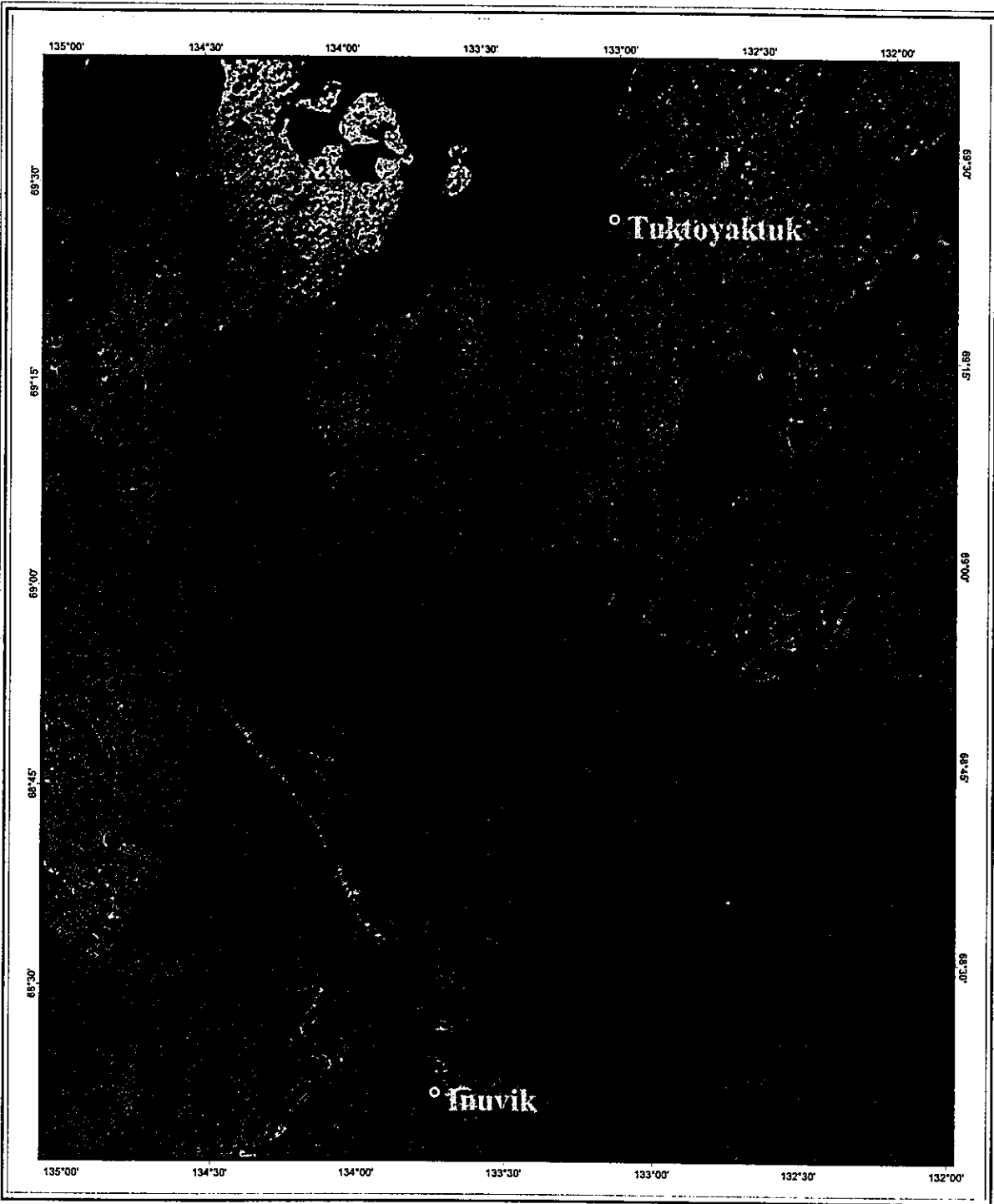
Equipment, including the camp barge, will be mobilized from Inuvik on July 30, 2004 and arrive at Kittigazuit on August 3, 2004. All equipment will be offloaded with work commencing immediately. It is estimated that it will take three (3) weeks to complete the scope of work. Equipment and containerized soils will be loaded onto the barge on August 30, 2004 and demobilized to Inuvik. The barge should arrive in the following week.

Start date August 3, 2004 Completion date August 24, 2004

David Wells	Environmental Scientist		June 9, 2004
NAME	TITLE	SIGNATURE	DATE

FOR OFFICE USE ONLY

APPLICATION FEE	Amount: \$	<u>30.00</u>	Receipt No.: _____
WATER USE DEPOSIT	Amount: \$	_____	Receipt No.: _____



**Legend**

- ▲ Proposed Barge Camp
- ⊙ Townships

**Background**

Landsat 7 ETM Panchromatic Image Mosaic

**Figure 1:  
Barge Camp Location for  
Summer 2004 Kittigazuit  
Remediation Project**

Project Number: 50613-04  
GIS Cartographer: H. Wong  
Date: May, 2004  
Revision: 0

