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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)

<p>1. NAME AND MAILING ADDRESS OF APPLICANT/LICENSEE</p> <p>Rod Watson Project Manager Gérant de projet Directorate Construction Project Delivery Direction de la livraison de projet de construction</p> <p>Phone: 613-945-7720 Fax: e-mail: RODNEY.WATSON@forces.gc.ca</p>	<p>2. ADDRESS OF CORPORATE OFFICE IN CANADA (if applicable)</p> <p>National Defence Défense nationale 101 Colonel By Drive 101 promenade Colonel By Ottawa, Canada K1A 0K2</p> <p>Phone: 613-945-7720 Fax: e-mail: RODNEY.WATSON@forces.gc.ca</p>
<p>3. LOCATION OF UNDERTAKING (describe and attach a topographical map, indicating the main components of the Undertaking)</p> <p>The proposed project location is the PIN-3 Long Range Radar Station, Lady Franklin Point. Lady Franklin Point is located on a peninsula on the south-western tip of Victoria Island, the Kitikmeot region of Nunavut. The station itself is located approximately 2 km inland. The nearest communities to the proposed project location are Kugluktuk, located approximately 115 km to the south-west (on the main land), and Cambridge Bay, located approximately 325 km to the east (on Victoria Island)</p> <p>Latitude: (68°28'31.19" N) Longitude: (113°13'21.64" W) NTS Map Sheet No. <u>87A</u> Scale: 1:250,000</p>	
<p>4. DESCRIPTION OF UNDERTAKING (attach plans and drawings)</p> <p>The Long Range Radar (LRR) Station at Lady Franklin Point – PIN-3 was originally constructed in the late 1950's and was upgraded in the mid 1980's. In 2000, the main interconnected structures of the PIN-3 station suffered extensive fire damage. The radar tower, powerhouse and some modular units were destroyed.</p> <p>After the fire, environmental clean-up work was required. Ash plume deposits were collected and stockpiled in an engineered facility in May 2000. Stockpiled deposits, debris as well as contaminated soil were removed in 2003. The area currently consists of a gravel pad. A NIRB screening was completed for the clean-up work in December 2001. (NIRB 01DN100, NWB5FRA0101)</p> <p>The current project involves the construction and operation of a new radar tower, communication shelter, accommodation and utility building trains, two independent power plants and associated infrastructure in order to return the station to its full pre-fire operational capability. The existing vehicle refueling station does not meet current code requirements and is to be demolished and replaced as a part of this project. The site's electrical grounding system was badly damaged during site cleanup so new electrical grounding and distribution systems will</p>	

be installed. Construction is anticipated to begin in summer 2010 and be complete in fall 2012.

The new facilities will be constructed in approximately the same locations as the damaged structures. Crushed gravel will be required for leveling and re-grading of some parts of the project location. This material will be provided by crushing material from existing borrow sites within and in the vicinity of the PIN-3 LRR station.

The project will require the construction, operation and removal of a camp to accommodate workers. Approximately 30 staff are anticipated to be housed at the site during construction seasons.

Formal plans, designs and drawings will be provided by the Department of National Defence once the design consultants for the project are selected.

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

- | | |
|--|--|
| <input type="checkbox"/> Industrial | <input type="checkbox"/> Agricultural |
| <input type="checkbox"/> Mining and Milling (includes exploration/drilling) | <input type="checkbox"/> Conservation |
| <input type="checkbox"/> Municipal (includes camps/lodges) | <input type="checkbox"/> Recreational |
| <input type="checkbox"/> Power | <input checked="" type="checkbox"/> Miscellaneous (describe below): |

Please see attached questionnaire for the exploration/remote camp supplementary questionnaire.

See Schedule II of *Northwest Territories Waters Regulations* for Description of Undertakings

6. WATER USE

- | | |
|---|---|
| <input checked="" type="checkbox"/> To obtain water | <input type="checkbox"/> Flood control |
| <input type="checkbox"/> To cross a watercourse | <input type="checkbox"/> To divert a watercourse |
| <input type="checkbox"/> To modify the bed or bank of a watercourse | <input type="checkbox"/> To alter the flow of , or store, water |
| <input type="checkbox"/> Other (describe): | |

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

- Water use** ☒ 100m³/day or less
☐ Greater than 100m³/day; if greater, indicate quantities to be used for each purpose (camp, drilling, etc.)

Water returned to source

no water will be returned to source m³/day

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

- | | |
|---|---|
| <input checked="" type="checkbox"/> Sewage | <input checked="" type="checkbox"/> Waste oil |
| <input checked="" type="checkbox"/> Solid Waste | <input checked="" type="checkbox"/> Greywater |
| <input checked="" type="checkbox"/> Hazardous | <input checked="" type="checkbox"/> Sludges |
| <input checked="" type="checkbox"/> Bulky Items/Scrap Metal | <input type="checkbox"/> Other describe): |

As a minimum, the camp sewage will be directed to a lagoon situated at approximately 100 meters from the camp. This lagoon shall be located at least 100 meters from any natural drainage course or water bodies that support aquatic life. The sewage lagoons will be sized to provide an individual capacity for approximately one half of the duration of the construction season. The maximum fluid depth shall not exceed one meter. The sewage effluent will be tested prior to discharge for the following parameters: Biological Oxygen Demand, Total Suspended Solids, Oil & Grease; Faecal Coliforms and pH. Greywater from camp operations will also be discharged into the sewage lagoon. Domestic garbage will be incinerated in an enclosed container and the residual waste transported

to off-site facilities. All excess fuels, camp equipment and facilities will be removed from the site after completion of the clean up activities. Any hazardous wastes encountered during the construction, operation or decommissioning phases of the PIN-3 LRR will be packaged and stored according to Transport of Dangerous Goods Regulations prior to shipment to a southern disposal facility. Waste oil, in this case, is included as hazardous waste and will be treated as such in the waste management plan

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

Land Use Permit

DIAND

☒ Yes ☐ No If no, date expected _____

Regional Inuit Association

☐ Yes ☒ No If no, date expected _____

Commissioner

☐ Yes ☒ No If no, date expected _____

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

Based on the scope of the project, the following potential environmental impacts may occur as a result of the project. The list below identifies environmental components that may be impacted, and explains the potential and proposes possible mitigation measures.

Atmosphere:

Potential Effects:

- The use of aircraft and vehicle and heavy equipment traffic on dirt roads may increase the amount of dust and particulate matter released to the atmosphere. Vehicles exhaust emissions also have the potential to affect air quality.
- Ground disturbance during construction activities may increase the quantity of airborne dust and particulate matter
- The use of diesel generators to supply electrical power will cause greenhouse gas and other emissions to the atmosphere.
- Waste incinerated can produce toxic fumes if hazardous in nature or if combustion is incomplete.

Mitigation Measures:

- Implement speed limit and use water for dust suppression on airstrips, roads and construction areas;
- Use tarpaulin to cover truck box when fine material is hauled;
- Incinerate non-hazardous waste in an oxygen-rich environment to promote complete combustion

Terrain & Vegetation:

Potential Effects:

- Vehicle traffic and storage of equipment on the Tundra has the potential to adversely impact the fragile vegetation.
- Removal of vegetation cover to exploit borrow areas will destroy vegetation and increase the potential for erosion.
- Extraction of material for gravel will alter terrain topography and has the potential to affect surface drainage

Mitigation Measures:

- Restrict overland traffic to existing roads
- Restrict storage and work areas to existing gravel pads;

- Whenever possible, extract borrow material from previously disturbed areas
- Upon work completion, grade borrow areas to blend with surrounding terrain;

Surface Water and Soils:

Potential Effects:

- Due to the remoteness of the site, fuel is mobilized and stored onsite. Fuel transfer activities have the potential to contaminate soil and surface water in the event of leaks or spills.
- Improper disposal of domestic waste could impact surface water and soil quality.

Mitigation Measures:

- Spill kits will be provided at every fuel transfer location.
- Leak-free containers and reinforced rip- and puncture-proof hoses and nozzles will be used.
- The Contractor will dispose of sewage in a temporary lagoon. Specifications for the size and location of the lagoon shall be determined by the design consultant based on site characteristics and estimated crew size. Upon project completion, backfill lagoon and grade into surrounding terrain.

Aquatic fauna and habitat:

Potential Effects:

- The taking of water from the supply lake has the potential to adversely impact fish and its habitat
- The beaching and construction of a ramp at the beach for mobilization and demobilization of large equipment by barge could affect terrestrial and marine habitat.

Mitigation Measures:

- Water withdrawals must not endanger fish or draw down the water to a level that would adversely affect fish habitat.
- All water hoses are to be equipped with screens with a mesh size of 2.5 mm or less to prevent the intake of fish as per the Freshwater Intake End-of-Pipe Fish Screen Guidelines of DFO.
- The contractor will choose a beach landing area has been previously disturbed (during previous projects conducted at the site).
- The contractor will use silt curtains when preparing the beach landing area to minimize siltation of the marine environment.

Heritage & Historical Sites:

Potential Effects:

- Any excavation work, development of new roads or use of an undisturbed area for storage or work area has the potential to disturb archaeological features known to be present in the area.

Mitigation Measures:

- Archaeological features identified in Figure 1 will be located and marked and a 30 m buffer zone will be established prior to establishing new routes, expanding borrow areas or establishing stockpiling/storage areas. Coordinates of all identified features are available in the archaeological reports listed in section 13.
- During excavation, the contractor will monitor for the presence of archaeological features. If any potential archaeological features are discovered. Work will be stopped and an archaeological consultant will be contacted.

Cumulative Effects:

The proposed reconstruction project area will be mostly limited to non vegetated areas in the vicinity of the station area, use of existing roads and beach landing area. Based on the information available, and assuming the mitigation measures listed above are implemented, it is not anticipated that any significant adverse cumulative effects will result from the

reconstruction of the PIN-3 LRR station or related work.

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?

NO

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?

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

Name, address and functions are not available at this time, but will be provided upon selection of the construction contractor consultants

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

Golder Associates, January 2007. *Archaeological Impact Assessment (AIA) of the PIN-3 Reconstruction at Lady Franklin Point, Victoria Island, Nunavut* (DCC Project HN 0320), File 05-133-092

JWA, February 2004. *Final Report on Archaeological Mitigation Study at PIN-3, Lady Franklin Point, Victoria Island, Nunavut*, Project ONO50572.

Copies of these reports can be made available if requested.

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 (**Federal Land**)

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 (**Federal Land**)

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: 2010 Completion Date: Unknown

Rodney Watson <u>Rodney Watson</u> Name (Print)	PIN-3 LRR Reconstruction Project Manager _____ Title (Print)	<u>[Signature]</u> Signature	<u>03 MARCH 2009</u> Date
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For Nunavut Water Board office use only

APPLICATION FEE Amount: \$ _____ Pay ID No.: _____

WATER USE DEPOSIT Amount: \$ _____ Pay ID No.: _____



(Source :Golder Associates, January 2007. Archaeological Impact Assessment Of The Pin-3 Reconstruction At Lady Franklin Point)