



8 March 2013

Mr. R. Barry  
Nunavut Impact Review Board  
PO Box 1360  
Cambridge Bay, NU X0B 0C0

Dear Mr. Barry

**RE: DRDC Atlantic 2012 Annual Report for Operations at Gascoyne Inlet Camp, Devon Island, Nunavut**

References:

- A. Land Use Permit N2008N0027
- B. Water Use Licence 1BC-NWT1113
- C. NIRB 08DN056

The DRDC Northern Watch Technology Demonstration Project will demonstrate an Arctic maritime surveillance capability to the Department of National Defence and other concerned federal departments. This is a multi-year undertaking and is based at Gascoyne Inlet.

The surveillance demonstration system will be unmanned, semi-autonomous, and remotely controlled through a satellite system connection to one of the DRDC centres. The project plan will culminate in a six month capability demonstration between August 2014 and August 2015.

Defence Construction Canada is providing the following annual report, which summarizes the activities in 2012 and outlines the planned activities for 2013. This information is being submitted on behalf of David Hazen, Deputy Director General, Defence Research and Development Canada (DRDC Atlantic).

**Summary of 2012 Activities**

In 2012 a small DRDC team went up to site to open the camp and conduct routine camp maintenance. The multi-purpose building erected in 2011 was completed and put into full operation. A new generator building was constructed and two 25 Kw generators were installed. A temporary science facility was erected at a site above the camp; this facility consisted of a large tent, porta-pottie toilet, 5.5 Kw generator and several antenna masts. The Northern watch sensors were operated from this site. All material was removed and stored in the camp on completion of the deployment. DRDC brought in a floating dock for use as a small barge and dock capability. The Floating dock was brought ashore and stored locally for the winter. DRDC staff launched two underwater sensor systems with communications to the camp science facility; the underwater sensors collected data concerning the underwater acoustic environment. All of this equipment was recovered and returned to Halifax in CFAV Quest at the end of the deployment. An underwater data recorder was placed on the sea bottom near the mouth of Gascoyne Inlet. It will be recovered in summer 2013. The camp supported 45 people during the deployment. These people included DRDC, Canadian Forces, NRCan, DFO, CHS organizations. The camp operated as a staging area for most of the work that was conducted from CFAV Quest.

Wildlife Log 2012

Wild life observed:

17 Jul	8-10 Arctic Hare on hillside east of camp
21 Jul	Polar bear spotted on ice floe in Barrow Strait
31 Jul	Female and two cubs came into camp. All appeared to be in very good condition. Female estimated at 800 lbs, cubs at 100-130 lbs. headed off to Caswell tower area
1 Aug	Arctic fox seen at Walrus Point
2 Aug	Arctic fox loitering south of camp
3 Aug	Female bear and cubs return to camp. Chased off by helicopter towards Radstock Bay
7 Aug	Arctic Fox in camp
8 Aug	Arctic Hares in camp
11 Aug	Arctic Fox in camp
13 Aug	Arctic Hares in camp
14 Aug	Arctic Fox in camp
21 Aug	Female bear and two cubs observed in vicinity of Caswell Tower moving west
21 Aug	Arctic Hares back in camp
23 Aug	Arctic Hares back in camp
24 Aug	Large male bear in camp in early morning. Estimated at 1500 lbs driven off with bear bangers to west side of inlet.
24 Aug	male bear spotted on west side of Gascoyne Inlet moving along shore line towards Erebus and Terror Bay
Note that there were few sea birds and no seals observed in and around Gascoyne Inlet while the camp was open	

Work Plan for 2013

For the 2013 season DRDC will be maintaining the existing camp, and conducting research activities from both the camp and the Canadian Forces Auxiliary Vessel (CFAV) Quest.

On land a new science hut will be erected at the surveillance site (Birdseye) above the camp. It will be a prefabricated wooden cabin. A buried communications line will be installed between the Birdseye site and the camp. This line will cross the drainage area to the south of the camp via poles. A 3.8m satellite dish will be installed between the old and new generator huts. One of two new eight person prefabricated bunkhouses will be set up in the camp. A fuel cache with berm will be set up in the camp area; it will hold up to 200 drums of fuel. Fuel delivery will commence in summer 2013 and be completed in summer 2014. Fuel will be consumed during a six month system trial in 2015. A new underwater array system will be installed in Barrow Strait and will be connected to the camp via the existing underground pipe. Electro-optical sensor measurements and trials will be conducted from the Birdseye science cabin. A semi-permanent weather station will be installed at the Birdseye site. This meteorology information will be transmitted to DRDC via satellite. The underwater arrays will be deployed from a Chartered ship in early August. The Chartered ship will also conduct multi-beam sonar mapping of a 20 x 20 Km area of Barrow Strait. This survey is in aid of determining iceberg impacts in the area. CFAV Quest will support Shore based electro-optical trials and calibration of the underwater arrays. Quest will also support sea bottom mapping activities with multi-beam sonar. A navy Maritime Patrol vessel will support trials in the area.

### Compliance with NIRB Terms and Conditions

The DRDC Northern Watch project has endeavoured to comply with all terms and conditions required by the land use permit and all applicable Acts, Regulations and Guidelines.

- All camp fuel was stored and covered, in an impermeable berm located more than 30 m from any water body. The berm liner was covered with gravel, large stones and construction brick residue.
- On site domestic waste was incinerated (within a forced air incinerator) and the ash was disposed of in the Resolute municipal landfill.
- All camp building material was left neatly stacked.
- The cookhouse was left unlocked and a shovel was left hung up near the door for Hunters and Trappers Association use over the winter.
- DRDC staff was briefed on all of the terms and conditions of licencing including the archaeological and palaeontology requirements.
- No hunting or fishing was conducted by camp staff. All food and food waste were protected from access by local wildlife.

Should you have any questions concerning the Northern Watch project or of the Gascoyne Inlet Camp, please contact Bruce Grychowski, DRDC Northern Watch Project Manager, (902) 426-3100 ext 227, e-mail [bruce.grychowski@forces.gc.ca](mailto:bruce.grychowski@forces.gc.ca) .

Sincerely,



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CC:

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