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Date: *August 28th, 2012*
Submitted by: *Dr. David Corrigan*
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RE: Annual Report for NWB Licsence No. 3BC-GEM0911
Camp Location: Melville Peninsula, NU

Introduction: This permit is for a medium-sized geoscience mapping project that took place on Melville Peninsula in the summers 2009, 2010 and 2011, by the Geological Survey of Canada (Natural Resources Canada). Specifically, this Annual Report involves the third and final field season which took place in the month of July 2011. A Report for the 2010 field season was submitted in November 2010 (main camp that year located north of Barrow River in NTS map sheet 46-O, at the following coordinates:

N 67° 29.46’ W 82° 49.846’

An amendment requesting the location of the 2011 camp at MacKar Inlet (western coast of Melville Peninsula at N 68° 20.8’, W 85° 44’, CAM-5 DEW line station) was approved by INAC and is attached. The MacKar Inlet camp was a small, minimal impact camp of 11-12 persons conducting federal government geoscience and university research. The camp operated from July 1st to 26th using tents (no permanent structures).

Work was helicopter-supported and consisted of daily set-outs of traversing teams who did 5-10 Km traverses on foot and collected rock samples (with geological hammer) for analysis. We were camped at the now reclaimed CAM-5 DEW line station, at the same site where Biogénie had their camp in the winter 2010-11 during their clean-up operation. We left the site in the same state as when we found it in July 1st 2011 (clean, but with minor oil spills in gravel near the corrugated metal hangar. These old spills likely originated from heavy machinery used previously on the site).

Since we were operating near the coast of Committee Bay, we hired two Inuits from Repulse Bay as bear/wildlife monitors. No polar bears were observed during our stay. A few solitary wolves were seen passing through at a distance. We did not see any foxes, wolverines, or other predators.

Report Details

a. Summary of water use and waste disposal activities.

- Approximately 400 litres of water per day were used during camp operation, between July 1st and 26th. Water was used for drinking/cooking, washing dishes and for showers. Water was pumped from an unnamed river at the east end or the runway (1 km from camp), into water jugs that were transported to camp by ATV where it was emptied into a 1000L graduated plastic reservoir. The pump nozzle had a sieve. Water levels and quality in the source river remained excellent throughout the summer. Dishwater was coarsely sieved by passing through perforated buckets, before being decanted in sumps dug in thick gravelly soil. All solid food waste was incinerated. Grey water from the shower was evacuated directly in a sump (same area, same soil type). All sumps were covered with sand/gravel at the end of the summer. The sump pits were approximately 400m away from the nearest bodies of water.
- Garbage was burned daily in a "Smart Ash" incinerator. As much metal as possible (crushed cans) was removed and shipped out to Repulse Bay for proper disposal at the municipal landfill. Heavy plastics were collected and shipped to Repulse Bay for disposal.
- Toilet was of "out house" type. Human waste was covered with lime and buried under at least 1 meter of gravelly/sandy soil. Note that daytime camp population was 3 to 4 individuals, so toilet usage in camp was minimal.

b. List of unauthorized discharges.

- None.

c. Spill Contingency Plan.

- All fuel containers larger than jerry cans (e.g., jet-B, diesel, regular gas in 45 gal drums) were kept in one portable berm near the landing strip. Helicopter refueling was done at the berm in order to eliminate any possibility of spills on the ground.

- For electrical power, the camp used one small, portable diesel generator that was placed on a drip-pan during refueling.

- Small diesel-burning furnaces were used to heat the office and kitchen tents. Fuel lines connecting 45 gal fuel drums to furnaces were wrapped with absorbent cloth from spill kits and had a drip pan underneath. No spills were observed.

d. Description of all progressive or final reclamation work.

- This was a relatively small, low-impact project without any drilling, sample processing, or use of heavy machinery. Tents were used for kitchen, office and sleeping quarters, and no permanent structures were built.
- Reclamation work consisted of picking up any piece of garbage (paper, plastic, etc…) on a daily basis, and ensuring proper flow of water in sumps to eliminate any possibility of spill. All holes dug up for camp operations were refilled at the end of the summer.
- All used fuel drums (70 drums of Jet-B, 2 drums diesel, 1 drum gas) were cleaned, crushed, and transported back to Repulse Bay for proper disposal.
- One trip was made to our 2010 camp at Barrow River to remove all remaining items from the 2010 field season.

e. Summary of all information requested and results of the monitoring program.

- No information requested, except camp location. An inspection was planned by INAC and Nunavut Water Board on July 16th 2011 but that visit was cancelled due to poor weather.

f. Other details requested by the board.

- None

Appendix

1- Map of Melville Peninsula showing 2009, 2010 and 2011 camp locations.
2- Detailed map of camp location at CAM5 base (MacKar Inlet).
3- Copy of letter from INAC with new permit extension approval.
4- Photograph of camp layout on apron next to airstrip.
5- Material (electrical wires, minor oil spills) present on site upon our arrival on July 1st 2011.