



Natural Resources
Canada
Geological Survey
of Canada

Ressources naturelles
Canada
Commission géologique
du Canada

March 28, 2018

Nunavut Water Board Licensing Administration
P.O. Box 119
Gjoa Haven, NU, X0B 1J0

RE: Application for Approval for the Use of Water & Deposit of Waste without a Licence by the GEM-2 Boothia-Somerset research project: Integrated Geoscience along the Northwest Passage

The Geological Survey of Canada (GSC), Natural Resources Canada, seeks to undertake integrated geoscience research on western Somerset Island and northern Boothia, Nunavut between July 4 and August 16, 2018. The research area across which pairs of geological mappers will walk comprises parts of three 1:250 000 scale NTS map sheets: northern 57G, western 58B and western 58C, with a proposed camp site located near Creswell Bay, the site of an existing airstrip.

Executive Summary:

This research project is undertaking bedrock mapping by foot traverse of a 17,500 km² region for which knowledge stems from 1962. It is intended to significantly upgrade the outdated geoscience framework of this area, and provide relevant data and knowledge for this remote region so that all stakeholders can understand and assess its geological history and mineral resource potential.

Geoscience research will take place from a low-impact, temporary, tent camp to be constructed with material brought in and flown out when completed. The proposed camp site, located 200 km south of Resolute Bay is located near Creswell Bay close to an existing airstrip and to a source of fresh drinking water (Union River flowing from Stanwell-Fletcher Lake). Water use is for domestic purposes only, including drinking water for a maximum of 20 people, water to hand-wash and rinse dishes, and occasional showering. 5m³ of water is estimated to be required daily, to be pumped by a small, gasoline-powered Honda water pump with flexible hose equipped with a screen to minimize any influence on aquatic life and river bottom.

In terms of waste, all grey water (2m³ per day estimate) will be filtered at a distance of >31 m from all water sources, through the active soil horizon in a contained pit, for which the topsoil and lichen will be reserved and replaced after use. Human waste (30 litres per day estimated) will decay naturally in a pit (outhouse style) to be sprinkled with lime powder as a natural neutralizer. The sewage pit will be filled in after use, and the reserved topsoil and lichen replaced to minimize any effects on the land.

This cover letter, with executive summary related to water and waste use, accompanies an application for approval without a licence submitted on March 23, 2018 with the understanding that NIRB screening (in progress) acceptance is an initial requirement.

If there are any further questions please do not hesitate to contact me. If I am unavailable, Melanie MacKay can address your questions in my absence.

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