



Water Resources
Nunavut Regional Office
P.O. Box 100
Iqaluit, NU, X0A 0H0

Your file - Votre référence
2BE-KLG01116

November 22, 2012

Our file - Notre référence
CIDM# 608844

Phyllis Beaulieu
Manager, Licensing
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU, X0A 1J0

**Re: Type 'B' Water Licence No. 2BE-KLG1116, Amendment Application – Kiyuk Lake
Project – Prosperity Goldfields Corp. – Kivalliq Region**

Dear Phyllis Beaulieu:

Aboriginal Affairs and Northern Development Canada (AANDC) has performed a review of the water license amendment application 2BE-KLG01116 submitted by Prosperity Goldfield Corporation to the Nunavut Water Board (NWB). The following advice has been provided pursuant to AANDC's mandated responsibilities under the Nunavut Waters and Nunavut Surface Rights Tribunal Act (NWNSRTA) and the Department of Indian Affairs and Northern Development Act (DIAND Act). In conducting our review, AANDC referred to the documents on the NWB's FTP-site under 2BE-KLG1116.

Should you have any questions or comments, please do not hesitate to contact me at (867) 975-4568 or by e-mail at Rory.MacDonald@aandc-aadnc.gc.ca

Regards,

Sent via Email

Rory MacDonald
Water Resources Technician

Cc. Murray Ball, Manager of Water Resources, AANDC
Andrew Keim, A/Manager of Field Operations, AANDC



Technical Review Memorandum

To: Phyllis Beaulieu – Manager of Licensing, Nunavut Water Board

From: Rory MacDonald – Water Resources Technician, AANDC

Re: Type 'B' Water Licence No. 2BE-KLG1116, Amendment Application – Kiyuk Lake Project – Prosperity Goldfields Corp. – Kivalliq Region

A. Project Description

On October 22, 2012 the Nunavut Water Board (the Board) distributed Prosperity Goldfields Corp.'s (PGC) application to amend their Kiyuk Lake Project's Type 'B' Water Licence. The proposed amendments would allow for a third diamond drill, the expansion of the existing temporary camp, increased fuel storage, and preparation for an airstrip.

Drilling

An additional heli-portable diamond drill is proposed for the 2013 field season totalling three diamond drills. Drilling will be both land-based, as well as on-ice. Sumps will be used to hold drill cuttings. Sumps will be located at a minimum of 31 m from the normal high water mark of all water bodies and natural depressions will be used wherever possible.

Drilling activities will be carried out in the 2013 field season between February and September.

Camp

PGC is requesting to expand the existing temporary exploration camp to accommodate up to fifty (50) persons. A total of nine (9) additional prospector type tents will be constructed to accommodate additional personnel, an office, a dining hall and recreation area, as well as a dry tent.

Combustible waste will be incinerated on site and non-combustible waste will be backhauled to an authorized facility in Manitoba.

Increased Fuel Storage

Two additional 30,000L double walled fuel storage tanks will be placed in proximity to the proposed airstrip or existing tank farm to accommodate future fixed wing aircraft traffic.

Water Use

The existing water licence held by PGC authorizes 100 m³/day. Current domestic consumption is 8 m³/day and drilling activities 92 m³/day. With the addition of a third diamond drill and additional personnel, requested water use will be 160 m³/day: a total of 10 m³/day for domestic purposes and 150 m³/day to carry out the drilling program.

Airstrip Preparation

The proposed airstrip located at the Kiyuk Lake Project will be 800 meters long and constructed on a large natural sand deposit. Construction equipment will be delivered to the Camp in winter 2013 via Hercules plane on the ice-based airstrip.



B. Results of Review and Recommendations

AANDC Water Resources Division offers the following comments and recommendations for the Board's consideration.

1. General

- If the submitted amendment application is approved, PGC should submit a revised Spill Contingency Plan and Abandonment and Restoration Plan that address the revised Kiyuk Lake Project description (i.e., increased fuel storage, expanded temporary camp, mobilization of third drill rig, proposed airstrip, etc.).
- Prior to issuing any water licence amendment, all other applicable regulatory authorizations should be issued (i.e., amendment to the project's AANDC Class 'A' land use permit, NPC conformity decision, and NIRB screening decision).
- AANDC recommends that the licensee provide to the NWB a more detailed description on how to contain and clean-up spills that may occur on different substrates such as land (soil), snow and ice and water. AANDC recommends that the proponent provide specific mitigation and remediation techniques for each of the above mentioned substrates.
- AANDC has the following recommendations for ice-based drilling:
 - Drill cuttings should not be deposited on ice and should be directed to a sump or re-circulated.
 - The use of salt for ice-based drilling should be minimized.
 - Water quality sampling should be conducted prior to (i.e. baseline) and after drilling activities occur. Results to be included in monitoring reports.
 - Secondary containment of fuel is highly recommended for ice-based drilling.
 - Spill Plan should reflect ice-based drilling and a spill kit should be on site for ice-based drilling.