



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

Your file - Votre référence  
8BD-BGP----  
Our file - Notre référence  
GCDocs#105117380

August 10, 2022

Richard Dwyer  
Manager of Licensing  
Nunavut Water Board  
P.O. Box 119  
Gjoa Haven, NU, X0B 1J0  
E-mail: [licensing@nwb-oen.ca](mailto:licensing@nwb-oen.ca)

**Re: Crown-Indigenous Relations and Northern Affairs Canada's Review of the  
License Application for Baker Lake Geothermal Project, Type B Water License  
No. 8BD-BGP----**

Dear Richard,

Thank you for the August 2, 2022 invitation to review the referenced licence application, submitted by Qulliq Energy Corporation, for Type B Water Licence No. 8BD-BGP----

Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) examined the application pursuant to its mandated responsibilities under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Crown-Indigenous Relations and Northern Affairs Act*. Please find CIRNAC comments and recommendations in the attached Technical Memorandum.

If there are any questions or concerns, please contact me at (867) 975-3877 or [Joyce.Demers@rcaanc-cirnac.gc.ca](mailto:Joyce.Demers@rcaanc-cirnac.gc.ca) or Andrew Keim at (867) 975-4550 or [Andrew.Keim@rcaanc-cirnac.gc.ca](mailto:Andrew.Keim@rcaanc-cirnac.gc.ca).

Sincerely,

Joyce Demers, B.Sc.,  
Industrial Coordinator



## Technical Review Memorandum

**Date:** August 18, 2022

**To:** Richard Dwyer – Manager of Licensing, Nunavut Water Board

**From:** Joyce Demers – Industrial Coordinator, CIRNAC

**Subject: Crown-Indigenous Relations and Northern Affairs Canada's Review of  
the Licence Application for Baker Lake Geothermal Project, Type B  
Water Licence No. 8BD-BGP----**

**Region:**  Kitikmeot  Kivalliq  Qikiqtani

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### **A. BACKGROUND**

Qulliq Energy Corporation (QEC), is a Government of Nunavut owned company, who is the sole provider of electricity to all 25 communities in Nunavut. They provides energy to residents using stand-alone diesel generating plants. QEC is actively searching for new and renewable energy resources and has commissioned a Nunavut Geothermal Feasibility Study. The study is to be, conducted by RECPEC, according to guidelines set by the Canadian Geothermal Energy Association (CanGEA) for the Canadian National Geothermal Database (CNGD). Baker Lake was selected as a test site for investigating the geothermal potential on the Canadian Shield.

APEX Geoscience Ltd (hired by RECPEC) plans to drill, on the QEC power plant lot 447 within the municipality of Baker Lake, an approximately 800 meter hole to measure the amount of heat available and determine if that heat can be used to generate power. The intention is to either reduce or eliminate diesel dependency in for the Hamlet of Baker Lake.

APEX Geoscience Ltd is applying, on behalf of QEC, for a new Type B Water License for a period of 5 years. The board has identified the new application as number: 8BD-BGP--. The proponent is applying for a 5 year duration in the event that they are unable to drill the hole within the year. The drilling is supposed to take approximately 6 weeks to complete.

CIRNAC provides the following comments and recommendations pertaining to the application package. A summary of the subjects of recommendations can be found in Table 1. Documents reviewed as part of this submission can be found in Table 2 of Section B. Detailed technical review comments can be found in Section C.



**Table 1: Summary of Recommendations**

Recommendation Number	Subject
R1	Fuel Management Plan Noted but Not Included in Submission

## **B. DOCUMENTS REVIEWED AND REFERENCED**

The following table (Table 2) provides a list of the documents reviewed under the submission and reference during the review.

**Table 2: Documents Reviewed and Referenced**

Document Title	Author, File No., Rev., Date
220802 8BD-BGP---- 22YN042-NPC Conformity Determination-IMLE	Solomon Amuno, June 13, 2022
220802 8BD-BGP---- 22YN042-Screening Decision Report-IMLE	Nunavut Impact Review Board, August 2, 2022
220802 8BD-BGP---- 101020 - QEC Act-IMLE	Territorial Printer, No Date
220802 8BD-BGP---- Abandonment & Restoration Plan-IMLE	APEX Geoscience Ltd., April 1, 2022
220802 8BD-BGP---- Baker Lake Geothermal Project Exploration Remote Camp Questionnaire-IMLE	APEX Geoscience Ltd., June 21, 2006
220802 8BD-BGP---- Baker Lake Geothermal Project General Water Licence Application-IMLE	Tara Gunson, August 2, 2022
220802 8BD-BGP---- Emergency Response Plan-IMLE	APEX Geoscience Ltd., April 1, 2022
220802 8BD-BGP---- Environmental Management Plan-IMLE	APEX Geoscience Ltd., April 1, 2022
220802 8BD-BGP---- QEC Baker Lake Geothermal Project Non-Technical Summary - English-IMLE	Unknown, No Date
220802 8BD-BGP---- QEC Baker Lake Geothermal Project SCFMP - Part 1-IMLE	APEX Geoscience Ltd., April 1, 2022
220802 8BD-BGP---- QEC Baker Lake Geothermal Project SCFMP - Part 2-IMLE	Unknown, No Date
220802 8BD-BGP---- QEC Financial Statements-IMLE	Unknown, No Date
220802 8BD-BGP---- QEC- RESPEC Authorization Letter-IMLE	Rick Hunt, March 28, 2022



Document Title	Author, File No., Rev., Date
220802 8BD-BGP---- RESPEC-APEX Authorization Letter-IMLE	Debra Shewfelt, March 31, 2022
220802 8BD-BGP---- Waste Management Plan- IMLE	APEX Geoscience LTD., April 1, 2022



## C. RESULTS OF REVIEW

### 1. Fuel Management Plan Noted but Not Included in Submission

#### Comment:

It is noted in the Environmental Management Plan that a Fuel Management Plan would be included in the list of plans however no plan was submitted.

#### **“1.4 Other Plans**

The EMP should be considered as a part of the Project-wide management system. Other management plans in place at the Baker Lake Geothermal Project include:

- Abandonment and Restoration Plan (ARP)
- Emergency Response Plan (ERP)
- Fuel Management Plan (FMP)
- Spill Contingency and Fuel Management Plan (SCFMP)
- Waste Management Plan (WMP)”

#### Recommendation:

(R-01) CIRNAC recommends that they update list of plans and provide any additional information.