

## **PROJECT DESCRIPTION - GEOTECHNICAL INVESTIGATION**

**February 12, 2009**

Prepared by Taykwa Tagamou Nation and Ontario Power Generation Inc.

### **PROJECT BACKGROUND:**

Under a mandate provided by its community members, the leadership of Taykwa Tagamou Nation (“TTN”) and Ontario Power Generation Inc (“OPG”) are interested in undertaking a preliminary geotechnical site investigation program to determine the technical feasibility of developing part of a proposed hydroelectric site within a portion of the Little Abitibi Provincial Park (LAPP).

TTN is the lead First Nation located in this area. Their reserve is located between the Abitibi Canyon Generating Station and the Otter Rapids Generating Station.

The proposed hydroelectric facility will utilize some of the water from New Post Creek, and divert this water into the Abitibi River for the purpose of electricity generation. The geotechnical work contemplated is divided between two investigation areas. The first area encompasses the proposed intake which is located on the New Post Creek. The second area to be investigated is associated with a proposed powerhouse location adjacent to the Abitibi River. No in-water work is planned at this time; however, work is planned close to the water along the shoreline. (Please see the attached sketch).

Consultation with TTN community members has been carried out using both a Newsletter and a TTN website ([www.coralrapidspower.com](http://www.coralrapidspower.com)) to provide key highlights of work undertaken, and the proposed works. The geotechnical work was discussed in the October 2008 Newsletter distributed to the community.

### **PURPOSE:**

The Geotechnical work is required in order to:

- Determine the characteristics and depth of overburden along the potential penstock (or tunnel) alignment, and in the vicinity of the proposed powerhouse.
- Define the bedrock surface and determine the suitability for the proposed intake structure, penstock (or tunnel) and powerhouse.
- Determine the depth of groundwater and the groundwater flow regime at the project site.
- Assess overall feasibility of the potential site layout and the currently envisioned project configuration from a geotechnical perspective.

### **PROJECT DETAILS:**

TTN/OPG plan to retain the services of KGS Group who will scope, specify and manage the entire geotechnical investigation, field and laboratory investigation program. All drilling and coring will be performed by a qualified and registered driller. Where possible, attempts will be made to offer TTN employment opportunities.

The work will generally involve the application of advanced geophysical site characterization techniques and standard subsurface drilling methods used in the field of geotechnical engineering. Exploratory drilled boreholes will be used locally to augment this work.

During the program it will be necessary to clear an access trail to facilitate this work. The geotechnical investigation entails:

- Limited clearing of paths to each proposed borehole location
- Localized brushing for geophysical investigation and test pits
- Geophysical activities

It is anticipated that work will be undertaken in March and in September. For both periods, the duration of field work is approximately 3 weeks. If a March start is not possible, an alternative would be in the period from May 15 to June 30<sup>th</sup> 2009 after spring breakup. If the latter, conditions relating to the Migratory Birds Act will be respected in that an avian biologist will be hired to facilitate any tree clearing in that period.

Activities anticipated for March 2009 include topographic and site surveys, access clearing and brushing as well as seismic activities. Work to be undertaken in September 2009 includes additional topographic and site surveys, test pits, borehole drilling and bedrock coring as well as site restoration.

#### **SITE RESTORATION:**

Upon completion of the drilling program the area around the investigation boreholes will be reinstated to the same original topography. Site restoration will be undertaken. All brush will be cut into manually manageable sized pieces and left in contact with the ground on areas outside of the flood plain. Large trees will be used by TTN. All brush will be removed from the flood plain.