

NON-TECHNICAL PROJECT PROPOSAL DESCRIPTION for NRI application

Project Title: AEI – Roche Bay Magnetite Project – Water Quality Monitoring

Researcher's Name and Affiliation: Steve Moore, EBA Engineering Consultants Ltd.

Project Location: Roche Bay, Nunavut, Lat. 68 ' 27.5268 '' by Long. 82 ' 35.8237''

Timeframe:

1 to 1.5 days in June, 2010

1 to 1.5 days in July, 2010

1 to 1.5 days in August, 2010

Project Description: AEI – Roche Bay Freshwater Quality Monitoring

Purpose: To document water chemistry background levels in freshwater prior to development.

Goals & objectives: Fly to site and collect freshwater samples using appropriate and established sampling protocols. Following the collection process, ship samples to a certified Lab. for analysis.

Method of transportation: Helicopter (Long Ranger)

Any structures that will be erected (permanent / temporary): No structures will be erected.

restoration / abandonment plans: N/A

Methodology (collection protocol/collection mechanisms)

Sampling will be conducted according to standardized water quality guidelines, which includes a QA/QC program.

Water samples will be collected at Roche Bay in June, July and August. The locations of water sampling stations will be predetermined and a Global Positioning System (GPS) will be used to locate all stations. Water quality samples will be collected for standard analytical parameters including ultra-low dissolved metals, ultra-low total metals, major ions, low-level nutrients and inorganics.

ALS Environmental (ALS) of Edmonton will prepare the water sampling bottles for all water sampling events. All samples will be transported in portable coolers with ice packs.

In the field, powder-less latex gloves will be worn during handling of bottles and equipment to minimize contamination. All bottles will be rinsed three times with the source water (*i.e.* the same water the bottle will be filled with) prior to water

collection. To minimize trace metals contamination from the filters, filters were rinsed three times with source water prior to filtering the sample water.

As part of a Quality Assurance/Quality Control (QA/QC) program, travel blanks will be used; field blanks and duplicates will be collected and filter blanks submitted. Duplicates will be collected to test the validity of sampling procedures and laboratory methodology.

Water samples will be submitted to ALS in Edmonton for analysis, a laboratory accredited by the Canadian Association for Environmental Analytical Laboratories (CAEAL).

Data

short term & long term use of data. The data will be analyzed and written up in a water quality report. This report will become part of AEI's Environmental Assessment, should the project go ahead.

Reporting

How will the research results be communicated to the individual participants, communities, regional and Nunavut organizations? The research result will be communicated to (*i.e.* reports will be provided in individual participants as requested) communities during AEI regular community consultations. Summary reports will be provided to regional and Nunavut organizations as per the license.

Will the research result in a publication? No, not in a refereed journal.