



**Nunami Stantec Limited**  
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**VIA EMAIL: amaruq@qiniq.com**

July 31, 2018  
File No.: 144930114

Amaruq Hunters and Trappers Association  
P.O. Box 629  
Iqaluit, NU X0A 0H0

**Attention: Manasie Mark, Office Manager**

Dear Mr. Mark:

**Reference: Bathymetry and Geotechnical Surveys near the Sylvia Grinnell River**

## **1 BACKGROUND**

Nunami Stantec Ltd. (Nunami) was hired by the City of Iqaluit to complete a bathymetric survey across the Sylvia Grinnell River, and a geotechnical survey near the Sylvia Grinnell River. The surveys are being completed to determine the best spot for a possible drinking water intake.

As you might know, Iqaluit takes its drinking water from Lake Geraldine right now. Because the population of Iqaluit is growing every year, the City needs another drinking water source to make sure that there is enough drinking water for Iqaluit residents. The City has been studying this and wants to check which location along the Sylvia Grinnell River is the best place to take water from. Last year, Nunami helped the City with a study and determined that there is enough water in the Sylvia Grinnell River to take some out without harming Arctic Char fishing. But, before the City can use the Sylvia Grinnell River, they need to get a Water Licence from the Nunavut Water Board, and approval from Fisheries and Oceans Canada.

To help with the approval, the City needs to check which location along the river is best for a drinking water intake. Two locations will be investigated (Site A and Site B in the attached map) by Nunami during the field study. The two sites are north of, and outside of, the Sylvia Grinnell Territorial Park.

Two types of work will be done during the field study. The first type of work will measure the water depth across the river at each site (bathymetry survey). The second type of work will measure the depth to bedrock, on the land, next to the river (geotechnical survey).

For Nunami to complete the field study, we need a research licence from the Nunavut Research Institute. We need your support to get this licence. To help you with this decision, we have written this letter to tell you about our plan to complete the field study. If members of the HTA are available, we would also like to

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meet with you on the phone, and with one person from our Iqaluit office at the meeting. At the meeting, we would like to talk about Nunami's field study and the Sylvia Grinnell River.

## **2 SYLVIA GRINNELL RIVER FIELD STUDY**

We are planning to complete the field study in September 2018. Nunami will have field technicians and engineers completing the study. They will drive to the Sylvia Grinnell River using existing roads and trails in the city; they might use ATVs to drive to the two study sites, and they will also walk along the river.

Nunami plans to look at two locations on the Sylvia Grinnell River (Site A and Site B) that might be good to take water from. At each location, Nunami will complete a bathymetry survey and a geotechnical survey.

To do the bathymetry survey, Nunami will use a small remote-controlled boat to measure the depth of water across the Sylvia Grinnell River at the two locations. The boat is battery-powered and will be operated by a technician on-shore.

To do the geotechnical survey, Nunami will measure the depth to bedrock without digging or disturbing the ground. Nunami will use sound and pressure waves to map the rock materials below ground surface. The sound and pressure waves are generated by low-speed blast charges from cables laid out on the ground surface. Geophones are installed along the cables to receive the sound and pressure waves bounced-back from the rock material below ground surface. The data are interpreted by technicians and used to map the material types below ground surface. Depth to bedrock will be mapped over an area up to 100 square metres along the shore, and upgradient, of the Sylvia Grinnell River. No geotechnical survey work will occur in the river and these on-shore low-speed blast charges are not expected to cause any serious harm to fish in the river.

## **3 REPORT**

When Nunami's field trip is complete, we will write a report for the City to explain what we found. The report will talk about the water depth of the river at the two locations, the kind of bedrock or ground material we found along the shore of the Sylvia Grinnell River at each location, and recommend to the City which location is best to take water from. We can talk about the results of the study with the HTA if you are interested.

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## **4 CLOSING**

We hope that this letter has given the HTA information on the field study and you're interested in the work we plan to do. We would like to talk to you about the study on the phone and with a person from our Iqaluit office. We are interested in what you have to say about this study and the Sylvia Grinnell River. We will call you in a few days to talk about what day and time is best for you to meet.

Thank you for taking the time to read this letter. If you have any questions about Nunami's study, please phone Carey Sibbald at 867-446-7644.

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**NUNAMI STANTEC LIMITED**

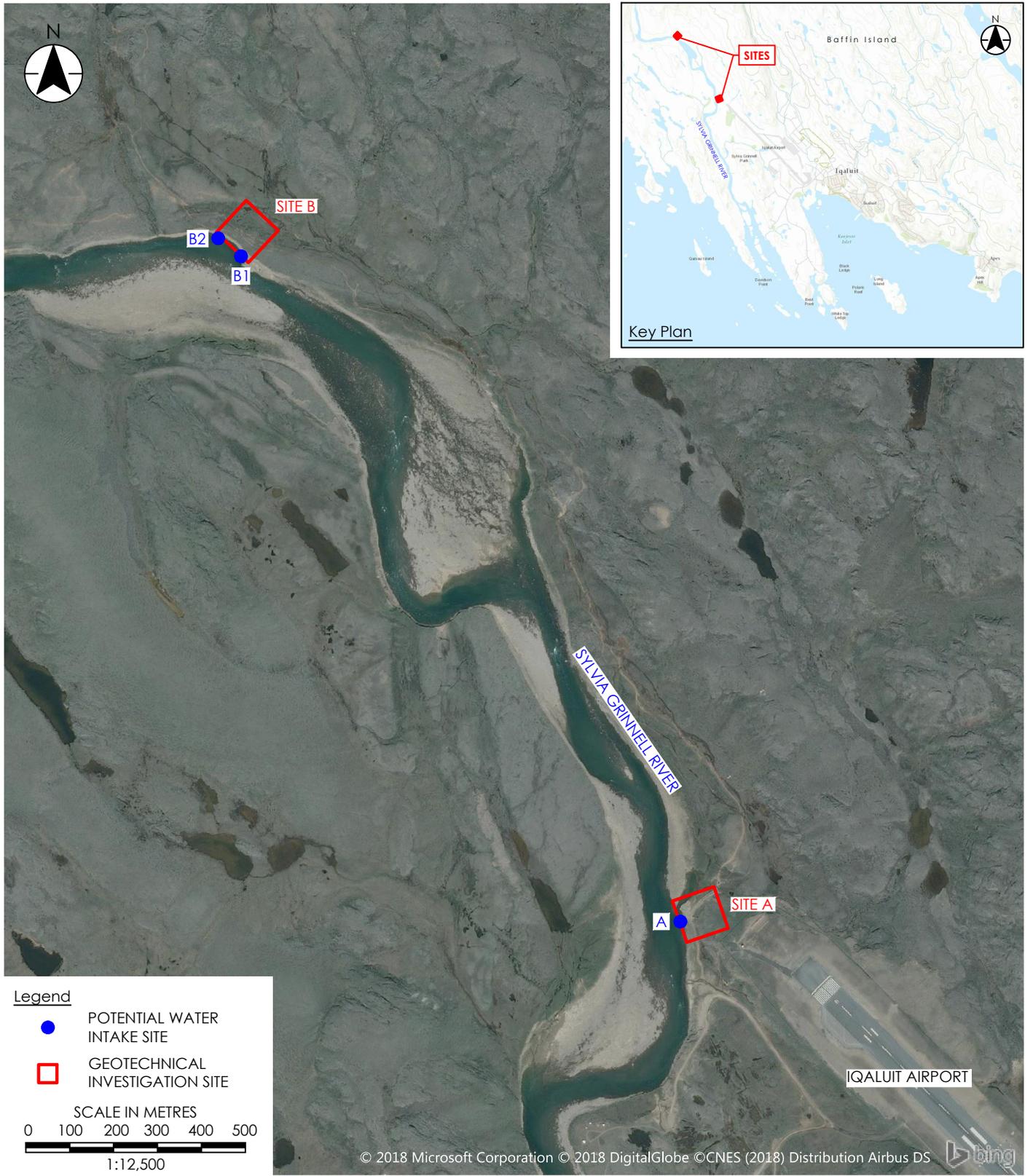
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CS/NL/

Attachment: (1) Map of the Sylvia Grinnell River near Iqaluit  
(2) Project Description in Inuktitut

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**Legend**

- POTENTIAL WATER INTAKE SITE
- GEOTECHNICAL INVESTIGATION SITE

SCALE IN METRES

0 100 200 300 400 500



1:12,500

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**NUNAMI**  
STANTEC LIMITED



**Project Information**

Project No.: 144930114  
 Scale: 1:12,500  
 Date: 2018-JUL-20  
 Drawn by: G. HUYNH  
 Checked by: W. BREWIS

**Project Location**

IQUALUIT, NUNAVUT

**Client/Project**

CITY OF IQUALUIT  
 SELF-ASSESSMENT FOR GEOPHYSICAL  
 INVESTIGATION ACTIVITIES ALONG  
 SYLVIA GRINNELL RIVER

**Title**

**GEOTECHNICAL INVESTIGATION  
 SITES LOCATION OVERVIEW**

**Dwg No.**

**1**

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 2018/07/23 4:41 PM By: Huynh, Gordon



