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July 31, 2018
File No.: 144930114

Nunavut Research Institute
Box 1720
Iqaluit, NU X0A 0H0

Attention: Moshia Cote, Manager – Research Liaison

Dear Ms. Cote:

Reference: Nunavut Research Institute Land and Water Research Application – Concept Advancement for Raw Water Supply from the Sylvia Grinnell River, Iqaluit, NU

Nunami Stantec Ltd (Nunami) is pleased to submit this Land and Water Research Application to the Nunavut Research Institute (NRI) to complete a field program related to Concept Advancement for Raw Water Supply from the Sylvia Grinnell River in Iqaluit, NU (the Project). The following letter outlines Section 1 to Section 3 of the application, including the non-technical Project Description (Section 2) in English and Inuktitut.

SECTION 1: APPLICATION INFORMATION

PROJECT TITLE

Concept Advancement for a Raw Water Intake on the Sylvia Grinnell River, Iqaluit, NU

APPLICANT'S FULL NAME

Nunami Stantec Ltd.

MAILING ADDRESS

P.O. Box 1779
Iqaluit, NU X0A 0H0

EMAIL

carey.sibbald@stantec.com

July 27, 2018

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SECTION 2: PROJECT PROPOSAL DESCRIPTION

PROJECT DESCRIPTION

With increased demand on the City of Iqaluit's drinking water supply, the City's Lake Geraldine drinking water reservoir needs more water. The initial plan to pump water from the Apex (Niaqunguk) River to the Lake Geraldine reservoir was cancelled due to a limited amount of water available. This required identification of a new water source, and water intake sites, to be chosen. Nunami completed a desktop study for the City of Iqaluit and identified that the Sylvia Grinnell River had enough water to meet the City's needs while still protecting important Arctic Char habitat in that river.

To move forward with preliminary engineering and design of a water intake at the Sylvia Grinnell River, Nunami needs to complete a field study to identify the best possible intake location. Nunami is planning to complete the field study in September 2018 to measure the depth to bedrock on the shoreline where pumping equipment might be located. Two sites along the Sylvia Grinnell River, but outside (north) of the Sylvia Grinnell Territorial Park are to be investigated. These are Site A and Site B on the attached map. At each site, depth to bedrock will be measured on-land, on the shore of the Sylvia Grinnell River, and water depth across the river will also be measured. The two sites will be accessed with a truck or ATVs using existing roads and trails. No structures will be built and very little land disturbance is expected.

METHODS

To identify the best intake site on the Sylvia Grinnell River, the following methods will be used:

1. Bathymetry Survey: Nunami will use a small remote-controlled boat to measure the depth of water across the two sites in the Sylvia Grinnell River. The boat is battery-powered and controlled by an operator on shore.
2. Geotechnical Survey: Nunami will measure the depth to bedrock without digging or disturbing the ground. This will be done on-land at each of the two sites along the Sylvia Grinnell River. Nunami will use sound and pressure waves to map the 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 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.

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DATA USE

In the short-term, Nunami will use the data to identify the best site for a water intake in the Sylvia Grinnell River for the City of Iqaluit. In the long-term, data will be stored on Nunami’s servers and will be given to the City of Iqaluit.

REPORTING

Nunami will communicate the results of the study to the City in a report. Results of the study will likely be communicated by the City of Iqaluit through a public meeting. The study will not result in a publication.

SECTION 3: COMMUNITY INVOLVEMENT AND REGIONAL BENEFITS

COMMUNITY

Iqaluit, Nunavut

NAME

Manasie Mark, Office Manager

ORGANIZATION

Amaruq Hunters and Trappers Association

COMMUNITY

Iqaluit, Nunavut

NAME

Matthew Hamp, Director of Engineering

ORGANIZATION

City of Iqaluit

MINUTES

The City of Iqaluit has approved this Project, and is providing funding for it, as it is in the direct interest of the public and residents of Iqaluit. Results from the study will support long-term drinking water security for the community. A similar project proposal has also been submitted to the Nunavut Planning Commission for review.

Nunami has sent a description of our Project and field study (e.g., purpose, objectives, proposed timing and methods), along with the NRI application, to the Amaruq Hunters and Trappers Association. Nunami has requested a meeting with the Amaruq HTA to further talk about our project and get their input and support.

Nunami will send any additional meeting minutes or updates on consultation to the NRI as soon as possible. This will include any identified concerns or support for the Project.

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CLOSURE

Thank you for reviewing our Land and Water Research Application to complete a field study for the Concept Advancement for a Raw Water Intake on the Sylvia Grinnell River in Iqaluit, NU. We will provide additional details on community support as soon as possible. In the meantime, if you have other questions, please do not hesitate to contact the undersigned.

Sincerely,

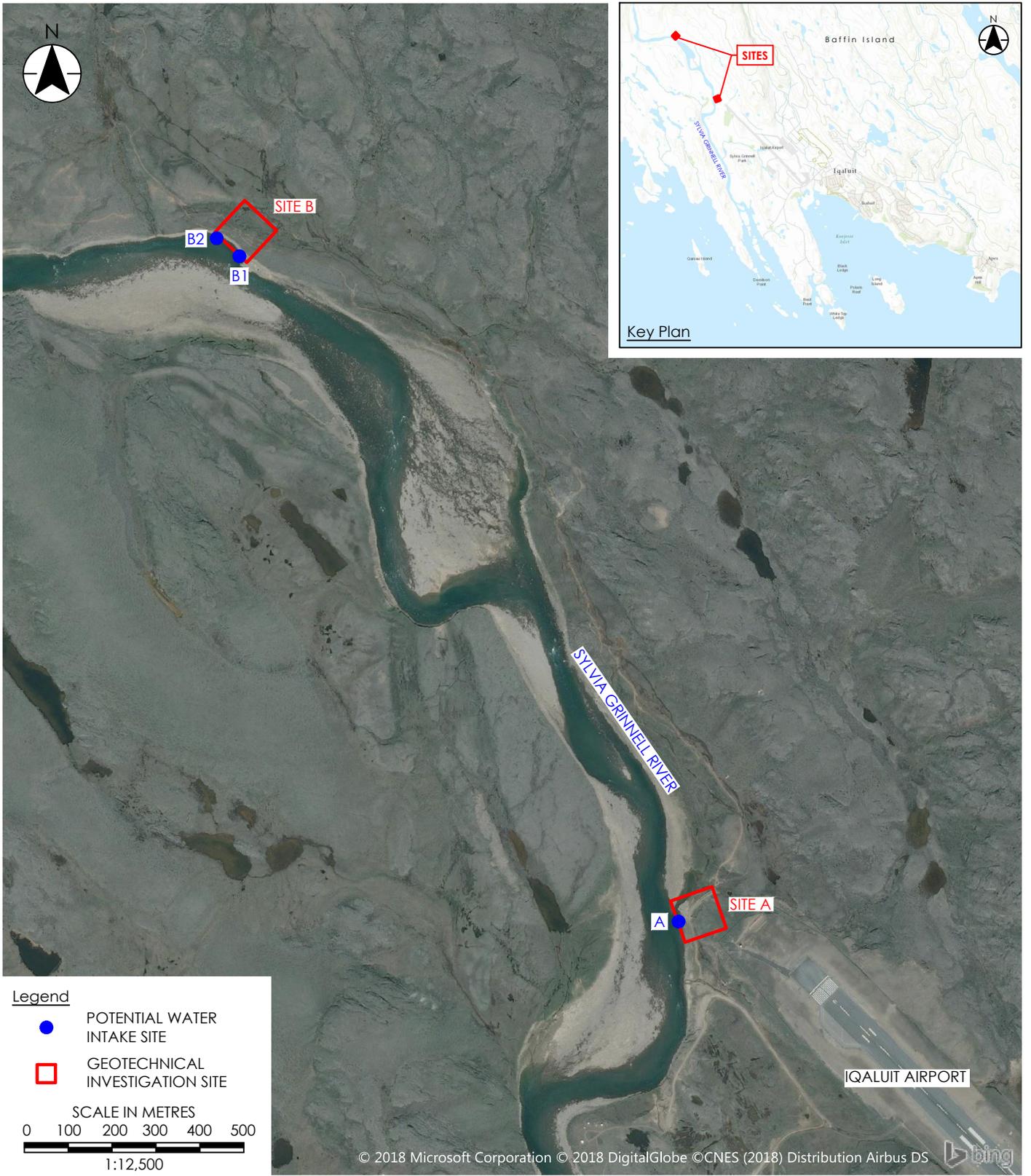
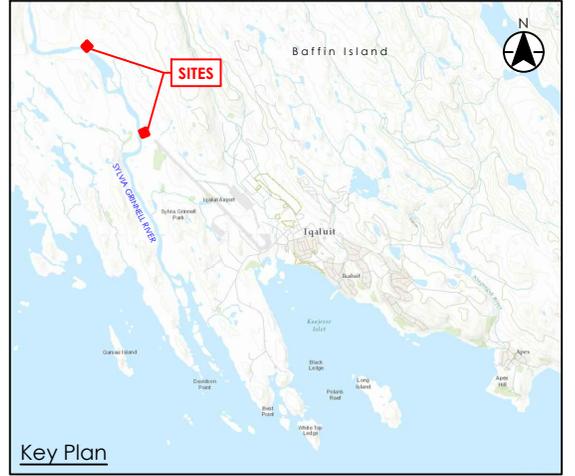
NUNAMI STANTEC LIMITED

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Nick.Lawson@stantec.com

CS/NL

Attachment: Figure 1 – Overview of the Sylvia Grinnell River Study Sites



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

IQALUIT, NUNAVUT

Client/Project

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

Title

**GEOTECHNICAL INVESTIGATION
SITES LOCATION OVERVIEW**

Dwg No.

1

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