Nunavut Research Institute / ᓄᓇᕗᒻᒥ ᖃᐅᔨᓴᖅᑐᓕᕆᔨᒃᑯᑦ
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SCIENTIFIC RESEARCH LICENSE

LICENSE NUMBER 04 010 22R-M

ISSUED TO: Brent Else
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TEAM MEMBERS: C.Hubert,C.J.Mundy,A.Michel,T.Studnyk,J.Kirk,Z.Walker,M.Leung, C.Braybrook,N.Johnson,E.Imbeau,B.Langan

TITLE: "Weather, Ice, Ocean, and Freshwater Measurements to Understand Greenhouse Gas Cycles and Aquatic Ecosystems"

OBJECTIVES OF RESEARCH:
This project tries to understand how greenhouse gases move through the Arctic environment. Greenhouse gases are the cause of climate change, and most people know that humans make them when we do things like drive cars or heat our homes. But greenhouse gases are also a natural part of ecosystems. One important place to find natural greenhouse gases like methane and carbon dioxide is in freshwater and seawater, where they exist as dissolved gases. CO_2 and CH_4 are important parts of these ecosystems because some organisms that live in the water make these gases, while others use them. For example, algae and other plants take CO_2 out of the water to make oxygen, while certain types of bacteria use up oxygen and make CH_4.
A second objective of this project is to find way to make our science useful to northern communities. We have been able to do this in the past. For example, we measure greenhouse gases at weather stations, and so we have worked with the HTO to set up weather stations at important locations. Data from those weather stations can be accessed online, and used when traveling.

TERMS & CONDITIONS:
The holder of the licence will be bound by the terms and conditions of the Nunavut Impact Review Board Screening Decision Report and the Department of Culture & Heritage archaeological sites terms and conditions. These terms and conditions will form part of this licence.

DATA COLLECTION IN NU:
DATES: April 25,2022 to December 31,2022
LOCATION: Cambridge Bay Surrounding Area

Scientific Research License 04 010 22R-M expires on December 31,2022
Issued at Iqaluit, NU on April 11,2022

Jamal Shirley
Science Advisor

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