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kNK5 wmoEp5 vtmp5 NUNAVUT WATER BOARD NUNAVUT IMALIRIYIN KATIMAYIT OFFICE DES EAUX DU NUNAVUT

APPLICATION FOR APPROVAL FOR THE USE OF WATER OR DEPOSIT OF WASTE WITHOUT A LICENCE

Refer to the <u>Guide to the Approval for the Use of Water or Deposit of Waste Without a Licence</u> (Guide) in completing this Application.

	ATION NO: B use only)				
(I Karen All Centre fo	or Earth Observation Science y of Manitoba		APPLICANT REPRESENTATIVE CONTACT INFORMATION if different from Block 1 (name, address)		
	g, MB R3T 2N2	Phone: Fax:			
Phone: _ Fax: _ e-mail: _	_1-431-554-5891 _karen.alley@umanitoba.ca	e-mail: j (Attach	authorization letter)		
3. NAME OF THE OWNER OF THE LAND THAT WILL BE USED IN RELATION TO THE WATER TO BE USED OR THE WASTE TO BE DEPOSITED Crown lands					
	NAME OF PROJECT (consistent with the name of the project issued by other regulatory agencies)				
Ice Dyna	amics and Cryospheric Changes in Northern	n Canada	a		
5. L	LOCATION OF UNDERTAKING				
Project Extents (decimal degree format)					
NW NE SE SW	77.2 -87.0 77.2 -78.1 76.1 -78.1 76.1 -87.0				

Camp Location(s) (decimal degree format)				
	Grise Fiord: 76.674, -85.217	Sydkap Glacier: 76.424 -85.2	,	
Name of the Gui		n which the Undertakin	g is located. (Please see Appendix D of	
Sout	h Ellesmere Island Watershed			
6.	CLASSIFICATION OF UNDERTA	AKING - Indicate the clas	ssification of undertaking by checking	
	☐ Industrial ☐ Mining ☐ Conservation ☐ Municipal _ Scientific research	[[[Agricultural Recreational Power Other: (describe)	
	See Appendix C of the Guide for c	lescriptions of classificati	ons of undertakings.	
7.	DESCRIPTION OF UNDERTAKI the undertaking including a descr depositing waste.		JSED – Provide a brief description of hat will be used in using water or	
We have defined a broad project area because we will carry out helicopter surveys over the Manson and Sydkap Ice Caps. However, most of our work will take place at Sydkap Glacier, where we will investigate ice dynamics and ice-ocean interaction. We will install GPS units and time-lapse cameras to measure ice flow and changes in water on the glacier surface. We will also measure the ice thickness using radar and the shape of the ice using a surveying drone. The drone will also be used to measure surface temperatures in fjord waters near the glacier. We will not insert instruments directly into water bodies during this research. We will collect enough water to supply camp in plastic collection containers.				
8.	SCHEDULE – Applicants are adverm.	rised that approvals withou	out a licence are issued for a one year	
	Proposed Start Date: _08/2022_ (Month/Yea		mpletion Date:08/2022 (Month/Year)	
9.	to the type of water use proposed	I. If none of the water use on for a water licence will	be required. See the NWB's Guide 4	
		oss a watercourse that i	d for a use of water related to the s less than 5 metres wide at the	
	For an undertaking other than training of an intermittent water		I for a use of water related to the	

	For an undertaking other than a Power undertaking and for a use of water related to the training of a watercourse that involves the infilling of the watercourse, if the watercourse has no inflow or outflow and a surface area of less than 0.5 hectares.					
	For an undertaking other than a Power undertaking and for a use of water related to the training of a watercourse that involves removal or placement of less than 100 m ³ of material.					
	For an undertaking other than a Power undertaking and for a use of water related to the construction of a temporary structure in a watercourse for the purpose of flood control.					
	For an undertaking other than a Power undertaking and for any use of water related to the storage of 2,500 m3 or less.					
	For an undertaki 50 m³ per day.	ng other than a Power und	ertaking and for any use of	water less than		
10. QUANTITY AND QUALITY OF WATER INVOLVED - For each type of water use indicated in Block 9, provide the source of water, the estimated quantity to be used in <u>cubic metres per day</u> , and the periods during which water will be extracted.						
a	ina the perioas au	ring which water will be ext	racted.			
Type of	f Water Use ed in Block	Name of water will be ext	Estimated quantity of water to be used in cubic	Periods during which water will be extracted		
Type of indicate	f Water Use ed in Block	Name of water	Estimated quantity of water to be	which water will		
Type of indicate	f Water Use ed in Block 9 g near Grise g near	Name of water source Surface streams near Grise Fiord or town water, if	Estimated quantity of water to be used in cubic metres per day	which water will be extracted		
Type of indicate Camping Fiord	f Water Use ed in Block 9 g near Grise g near	Name of water source Surface streams near Grise Fiord or town water, if available Supraglacial streams on Sydkap	Estimated quantity of water to be used in cubic metres per day 0.04	which water will be extracted August 7 th -9 th		
Camping Fiord Camping Sydkap	f Water Use ed in Block 9 g near Grise g near Glacier TYPE OF DEPOSI leposit of waste pr leposit of waste, a	Name of water source Surface streams near Grise Fiord or town water, if available Supraglacial streams on Sydkap Glacier T OF WASTE PROPOSED oposed. If none of the depon application for a water lice	Estimated quantity of water to be used in cubic metres per day 0.04	which water will be extracted August 7 th -9 th August 9 th -15 th es to the type of apply to the proposed the NWB's <i>Guide 4</i> –		
Camping Fiord Camping Sydkap	g near Grise TYPE OF DEPOSI leposit of waste proposit of waste, a completing and Surfer Storage tanks and storage tanks and storage tanks and surfer storage tanks and sur	Name of water source Surface streams near Grise Fiord or town water, if available Supraglacial streams on Sydkap Glacier T OF WASTE PROPOSED toposed. If none of the dependence of the depend	O - Check the box that application for a New Licenter posit of waste resulting from the posit of waste resul	which water will be extracted August 7 th -9 th August 9 th -15 th es to the type of apply to the proposed the NWB's <i>Guide 4</i> —ce.		
Camping Fiord Camping Sydkap	g near Glacier TYPE OF DEPOSI deposit of waste proposit of waste, and completing and Surfer storage tanks and testing or cleaning and for any deposit of an	Name of water source Surface streams near Grise Fiord or town water, if available Supraglacial streams on Sydkap Glacier T OF WASTE PROPOSED toposed. If none of the depon application for a water lice of the depon application for an activity and pipelines, and for any depond of unused storage tanks undertaking, for an activity undertaking, for an activity undertaking, for an activity undertaking, for an activity	D - Check the box that application for a New Licent related to hydrostatic testing posited to surface water and grosited to su	which water will be extracted August 7 th -9 th August 9 th -15 th es to the type of apply to the proposed the NWB's <i>Guide 4</i> —ce. Ing or cleaning of m hydrostatic ravel washing,		

For a Mining undertaking, for an activity related to exploratory work, any deposit of sewage to a sump.						
_ I	For a Power undertaking, any deposit of sewage to a sump.					
i	For an Agricultural undertaking, any deposit of sewage to a sump.					
	For a Recreation undertaking, any deposit of sewage to a sump.					
	For any Other type of undertaking not listed above, other than Municipal, any deposit of sewage to a sump.					
Blo	12. QUANTITY AND QUALITY OF WASTE INVOLVED – For each type of waste indicated in Block 11, describe the quantity in cubic metres/day, measures to avoid or mitigate adverse impacts, and periods of deposition.					
indicated	f Waste d in Block l1	Quantity to be deposited in cubic metres per day	Measures to avoid or mitigate any adverse impacts	Periods during which waste will be deposited		
Greywate	r/Urine	0.05	Deposited in sump area away from bodies of water	August 7 th -15 th		
Solid waste/gar	0 Removal from site N/A					
13. SIGNATURE I, Karen Alley (print name), certify that the information given on this form is, to the best of my knowledge, correct and complete.						
	X Yes □ No					
I, (print name), as an authorized representative of the Applicant,, certify that the information given on this form is, to the best of my knowledge, correct and complete.						
		☐Yes	□No			
I certify that the Nunavut Planning Commission's land use planning requirements under Article 11 of the Nunavut Land Claims Agreement have been met.						

		X Yes		□No
I certify that the Nunavut Impact Review Board's development impact review requirements under Article 12 of the NLCA have been met.				
		X Yes		□No
	I certify that the proposed water use is of a type set out in column 2 of Schedule 2 of the Regulations that further specified by column 3, in respect of an undertaking set out in column 1. See list in Block 9.			
		X Yes	□NA	□No
2 and 3	that the proposed deposit of very soft of Schedule 3 of the Regulative 3. See list in Block 11.			d then further specified in columns at is set out in column 1 of
		X Yes	□NA	□No
•	that the proposed water use of the watercourse whose waters	•	e will not substanti	ially affect the quality, quantity or
		X Yes		□No
	that the proposed water use owaters flowing through Inuit O		e will not substanti	ially affect the quality, quantity or
		X Yes		□No
I certify that the proposed water use or deposit of waste will not affect the use of waters by a person who would be entitled to compensation under sections 58 or 60 of the <u>Nunavut Waters Nunavut Surface Rights Tribunal Act</u> (Act) if their use of these waters were to be adversely affected by an applicant for a licence.				
		X Yes		□No
I certify that a licence is not required for another use of water, or deposit of waste in respect of the proposed undertaking.				
		X Yes		□No
I have read and agree to comply with the following conditions outlined in sections 4(3), 5(4), 5(5) and 6 of the <i>Nunavut Waters Regulations</i> :				
1.				rs or deposit waste in relation to that right, as if that applicant had a licence for the use
2.	Measures must be taken prior to using water to minimize any alteration to the bed or banks of a watercourse whose waters are to be used, and the measures shall be maintained during the operation of the undertaking.			
3.	No waste is to be deposited to surfa	ce water or within 31 n	netres of the ordinary h	nigh water mark of any body of water.
4.	The waste shall not contain more the hydrocarbon sheen.	an 15 milligrams per lit	re of petroleum or petr	roleum product and must not have a visible
5.		occurs first, the site sha	all be restored — to the	orized for the use of water or deposit of e extent practicable — to the state in which it
6.	An applicant who is authorized under	r the Regulations to us	se waters or deposit wa	aste without a licence shall:

a. b. c. d.	i. the quantity of water, in cubic metres, u ii. the quantity, in cubic metres, of waste of iii. the type of waste deposited each day, iv. where the waste is deposited, v. the concentration of the substance, or s making the deposit waste, vi. the methodology used to calculate or do vii. the measures that were taken to avoid of keep the books and records on the site of the und available during that period to an inspector on req submit to the Board a report containing a summar the site of the undertaking within 30 days after the abandoned, and (ii) the last day of the period auth keep the books and records for two years after su undertaking.	sed each day, leposited each day, substances, in the deposited solid or liquid the etermine the information referred to in items or mitigate any adverse impacts of the depo- ertaking during the period of its operation a- uest; y description and supporting photographs of e earliest of (i) the day on which the underta- iorized for the use or deposit without a licen	(i) to (iv), and sit of waste. nd make them of the restoration of king is closed or ce; ^b and
	Notes: a) A site need not be restored prior to the end of t without a licence, as required by Item 5, if the Bost that site prior to the end of that period.		
	b) An applicant need not submit the report referre approval for a use of water or deposit of waste wit waste, on the same site within thirty (30) days after	thout a licence, or a licence for a use of water	er or deposit of
	XYes	□No	
licence will be a The use or dep	at any approval granted by the Board for authorized for a period of one year after the posit is not authorized until the Board app in compliance with the conditions set out	ne day on which the Board approve roves the Application and it is only	es the Application.
	X Yes	□No	
	at if I have answered "No" to any of the a Board prior to the use of water or dep		required from the
	X Yes	□No	
Karen A Name (P		toba <i>Loven Alley</i> Signature	June 27, 2022 Date