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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

File: **8WLC-FPE1415**

June 2, 2014

Alexis Templeton
Department of Geological Sciences
UCB 399, 2200 Colorado Ave,
Boulder, CO 80309-0399, ON K1A 0E8
E:mail: alexis.templeton@colorado.edu.ca

Subject: 8WLC-FPE1415 – Formation and Preservation of Elemental Sulfur in springs relevant to Mars and Europa Project

Dear Mr. Templeton,

Please find attached Approval number 8WLC-FPE1415 issued to the Alexis Templeton - Department of Geological Sciences, University of Colorado by the Nunavut Water Board (NWB or Board) pursuant to its authority under Article 13 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*. The approval has been authorized for a period of one (1) year after the day on which the Board approves the application and includes conditions related to the use of waters or deposit of waste which are an integral part of this Approval required for this type of authorization under the *Nunavut Waters Regulations* (NWR).

This approval and the conditions contained therein, permits the carrying out of activities involving the use of waters or deposit of waste with respect to the application for approval. Any variation from these activities may result in a violation of this Approval and contravention of the NWNSRTA or NWR. The NWB would like remind the Applicant of the obligations with respect to the reclamation and reporting which will arise as this Approval approaches its expiry.

If the Department of Geological Sciences, University of Colorado contemplates the renewal of this Approval, it is the responsibility of the Department of Geological Sciences, University of Colorado to re-apply to the NWB. Note that if the approval expires before the NWB issues a renewal, the use of waters or deposit of waste must cease, or the Department of Geological Sciences, University of Colorado will be in contravention of the *Nunavut Land Claims Agreement* (NLCA) and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSRTA). The NWB recommends that an application for renewal of this Approval be filed at least thirty (30) days prior to its expiry date.

If the Department of Geological Sciences, University of Colorado contemplates changes to its undertaking involving a change in scope or increased activity, a water licence may be required. It is the Department of Geological Sciences, University of Colorado responsibility to apply to the NWB for a water licence in accordance with the timelines set out for licences.

This Approval has been posted to the NWB's Public Registry and FTP site and is accessible from the following link (using the username "public" and password "registry", without the quotes):
<ftp://nunavutwaterboard.org/1%20PRUC/8%20MISCELLANEOUS/8WL/8WLC%20-%20Camp/8WLC-FPE1415%20Alexis%20Templeton/>.

Sincerely,



Thomas Kabloona
Nunavut Water Board
Chair

TK/kk/ri

Enclosure: Approval Number: 8WLC-FPE1415

Cc. Qikiqtani Distribution List



NUNAVUT WATER BOARD APPROVAL WITHOUT A LICENCE

APPROVAL DECISION

APPROVAL NUMBER: 8WLC-FPE1415

This is the decision of the Nunavut Water Board (NWB) with respect to an application for Approval for the use of waters and deposit of waste, without a licence, dated April 14, 2014 made by:

DEPARTMENT OF GEOLOGICAL SCIENCES, UNIVERSITY OF COLORADO

to authorize the use of waters and deposit of waste during camps operations at the Formation and Preservation of Elemental Sulfur in springs relevant to Mars and Europa Project located at Borup Fiord Pass, Ellesmere Island within the Qikiqtani Region, Nunavut and, Greely Fiord Watershed (60) Water Management Area generally located at the geographical coordinates as follows:

Project Entent:	NW: Latitude: 81° 02' 30'' N	Longitude: 081° 45' 00'' W
	NE: Latitude: 81° 02' 30'' N	Longitude: 081° 28' 00'' W
	SE: Latitude: 81° 00' 50'' N	Longitude: 081° 28' 00'' W
	SW: Latitude: 81° 00' 50'' N	Longitude: 081° 45' 00'' W

Camp:	Latitude: 81° 01' 27'' N	Longitude: 081° 31' 33'' W
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DECISION

After ensuring that the application satisfied the requirements of Articles 11 and 12 of the *Nunavut Lands Claim Agreement* (NLCA) regarding land use plan conformity and development impact assessment; that the application satisfied the requirements of section 3 of the *Nunavut Waters Regulations* (NWR or *Regulations*); that the undertaking satisfied the requirements of sections 4 and 5 of the *Regulations* and that the applicant agreed to comply with sections 4(3), 5(4), and 6(1) of the *Regulations*, the NWB determined that:

Approval Number 8WLC-FPE1415 be issued, subject to the conditions of Schedule 1 contained therein (Motion # 2014-WL-009).

SIGNED this 26th day of May, 2014 at Gjoa Haven, NU.

Thomas Kabloona
Nunavut Water Board
Chair

TK/kk/ri



**NUNAVUT WATER BOARD
APPROVAL WITHOUT A LICENCE**

APPROVAL No. 8WLC-FPE1415

Pursuant to the *Nunavut Waters Regulations*, *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*, the Nunavut Water Board hereinafter referred to as the Board, hereby grants to

**ALEXIS TEMPLETON - DEPARTMENT OF GEOLOGICAL SCIENCES, UNIVERSITY OF
COLORADO**

UCB 399, 2200 COLORADO AVE, BOULDER, CO 80309-0399

Hereinafter called the Authorized Entity, the right to use waters and deposit of waste for a period of one (1) year after the day on which the Board approved the Application, subject to the conditions contained in Schedule 1 attached to this Approval:

Project Name:	FORMATION AND PRESERVATION OF ELEMENTAL SULFUR IN SPRINGS RELEVANT TO MASR AND EUROPA
Location:	QIKIQTANI REGION, NUNAVUT
Water Management Area:	GREELY FIORD WATERSHED - 60
Classification of Undertaking:	MISCELLANEOUS
Purpose:	USE OF WATERS AND DEPOSIT OF WASTE
Approval Criteria:	IN ACCORDANCE WITH SCHEDULES 2 & 3 OF NWR TOTAL WATER USE OF 5 CUBIC METERS PER ANNUM, DEPOSIT OF SEWAGE AND GREY WATER
Date of Approval:	May 26, 2014
Expiry of Approval:	May 25, 2015

Dated this 2nd day of June, 2014, at Gjoa Haven, NU

Thomas Kabloona
Nunavut Water Board
Chair



SCHEDULE 1

CONDITIONS FOR USE OF WATER OR DEPOSIT OF WASTE WITHOUT A LICENCE

General

1. In the case of an Authorized Entity who has a mineral right and who intends to use waters or deposit waste in relation to that right, the Authorized Entity shall respect the priority conferred on Inuit by section 62 of the *Act* as if that applicant had a licence for the use or deposit.

Use of Waters

2. The Authorized Entity shall take measures prior to the use of waters 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.

Deposit of Waste

3. The Authorized Entity shall not deposit waste to surface water or within thirty-one (31) metres of the ordinary high water mark of any body of water.
4. The waste must not contain more than 15 milligrams per litre of petroleum or petroleum product and must not have a visible hydrocarbon sheen.

Abandonment and Restoration

5. Prior to the closure or abandonment of the undertaking or end of the period authorized for the use of waters or deposit of waste without a licence, whichever occurs first, the site shall be restored — to the extent practicable — to the state in which it was before the use of waters or the deposit of waste occurred ^a.

Record Keeping

6. The Authorized Entity shall:
 - a. maintain accurate and detailed books and records of:
 - i. the quantity of water, in cubic metres, used each day,
 - ii. the quantity, in cubic metres, of waste deposited each day,
 - iii. the type of waste deposited each day,
 - iv. where the waste is deposited including GPS coordinates in Latitude and Longitude,
 - v. the concentration of the substance, or substances, in the deposited solid or liquid that has the effect of making the deposit waste,
 - vi. the methodology used to calculate or determine the information referred to in items (i) to (v), and
 - vii. the measures that were taken to avoid or mitigate any adverse impacts of the deposit of waste.
 - b. keep the books and records on the site of the undertaking during the period of its operation and make them available during that period to an inspector on request;
 - c. submit to the Board a report containing a summary description and supporting photographs of the restoration of the site of the undertaking within thirty (30) days after the earliest of (i) the day on which the undertaking is closed or abandoned, and (ii) the last day of the period authorized for the unlicensed use or deposit;^b and



SCHEDULE 1 (Cont.)

- d. keep the books and records for two years after submitting the report describing the restoration of the site of the undertaking.

Notes: _____

- a) A site need not be restored prior to the end of the period authorized for the use of water or the deposit of waste without a licence, as required by Item 5, if the Board issues a licence for the use of water or deposit of waste on that site prior to the end of that period.
- b) The Authorized Entity need not submit the report referred to in Item 6 (c) if the Authorized Entity obtains the Board's renewed approval for a use of water or deposit of waste without a licence, or a licence for a use of water or deposit of waste on the same site within thirty (30) days after the last day of the period previously authorized.