



Water Resources
Nunavut Regional Office
P.O. Box 100
Iqaluit, NU, X0A 0H0

Your file - Votre référence
3BC-HMP0712

August 28, 2013

Our file - Notre référence
CIDM# 706678

Phyllis Beaulieu
Manager, Licensing
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU, X0A 1J0

Re: Renewal Application – 3BC-HMP0712 – The Houghton Mars Project (HMP)

Dear Phyllis Beaulieu:

Please be advised that Aboriginal Affairs and Northern Development Canada (AANDC) have completed a review of the request for water license renewal 3BC-HMP0712 submitted by Dr. Pascal Lee of the Mars Institute. The Nunavut Water Board ("NWB") circulated the request for comments on August 8, 2013. All documents related to the request posted on the NWB ftp site under 3BC-HMP0712 were included in my review (See attached Technical Review Memo).

Should you have any questions or comments, please do not hesitate to contact me at (867) 975-4568 or by e-mail at Rory.MacDonald@aandc-aadnc.gc.ca

Regards,

Sent via Email

Rory MacDonald
Water Resources Technician

Cc. Murray Ball, Manager of Water Resources, AANDC
Erik Allain, Manager of Field Operations, AANDC



Technical Review Memorandum

To: Phyllis Beaulieu – Manager of Licensing, Nunavut Water Board

From: Rory MacDonald – Water Resources Technician, AANDC

Existing Licence: 3BC-HMP0712

Re: Renewal Application – 3BC-HMP0712 – The Haughton Mars Project (HMP)

1. Project Description

The Haughton-Mars Project (HMP) on Devon Island is an ongoing international research project renewing its licence term for another 5 years. The overall goal of this project is to explore and investigate the Haughton Crater and surrounding terrain as the site presents many exceptional attributes not found elsewhere on Earth, in particular the presence of a large, well-preserved meteorite impact crater and other unique terrain features similar to the Moon or Mars. Devon Island has been used by the Haughton-Mars Project (HMP) for this type of research since the project began in 1997. The base camp for this project is called the Haughton-Mars Project Research Station.

Activities on the HMP include: a) the scientific study of Haughton Crater and surrounding terrain (the history of water and the adaptations of microbial life to extreme environments); b) the testing and validation of new technologies and approaches for space exploration, including rovers, habitats, tools and instruments; c) education and public outreach activities.

The licence renewal submitted by Dr. Pascal Lee is for a term of 5 years to conduct similar work as has been done in the past. Water use for the project camp is requested at a total of 5m³/day from Lowell Creek. All greywater will be directed to a sump and blackwater will be collected in an empty drum and backhauled to an approved disposal facility (i.e. landfill in Resolute Bay).

2. Results of Review and Recommendations

AANDC Water Resources Division offers the following comments and recommendations for the Board's consideration.

A. General

- In the Proponent's Spill Contingency Plan under Item 10 (Emergency Contact List), Aboriginal Affairs and Northern Development contact information is incorrect. The list should be updated to include Manger, Field Operations at (867) 975-4295.

B. Water Use

- The proposed water use is appropriate for the requested undertaking. To ensure there are no compliance issues, AANDC recommends the Proponent request at a minimum, 5m³/day for expected water use to be taken from Lowell Creek.

C. Waste Disposal

- AANDC recommends that all sumps for the disposal of grey water be located a minimum distance of 30 metres from any water body and be managed to ensure that there are no adverse effects to the quality or flow of water. Furthermore, all sumps should be backfilled and contoured to match the surrounding landscape prior to the end of the project.