



P.O. Box 119

GJOA HAVEN, NU X0B 1J0

TEL: (867) 360-6338

Fax: (867) 360-6369

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NUNAVUT WATER BOARD

NUNAVUTIMALIRIYINKATIMAYINGI

File No: NWB6MAR0305

June 20, 2003

Robin Zubrin
President
Mars Society
11111 8th Ave. W, Unit A
Lakewood, CO 80215
E-mail: zubrin@aol.com

RE: NWB Licence No. NWB6MAR0305

Dear Ms. Price:

Please find attached licence No. NWB6MAR0305 issued to the Mars Society by the Nunavut Water Board (**Motion #: 2003-14**) pursuant to its authority under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (C-33) and Article 13.5.5 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*. The terms and conditions of the attached Licence related to water use and waste disposal are an integral part of this approval.

Sincerely,

Philippe di Pizzo
Executive Director

Enclosure: Licence No. **NWB6MAR0305**

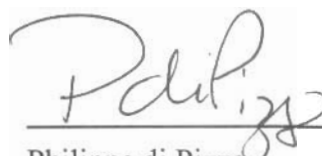
cc: Michelle McChristie, DIAND Iqaluit
Constantine Bodykevich, DIAND Inspector
Salomonie Shoo, Lands Manager, Qiqiktani Inuit Association
Gladys Joudrey, Nunavut Impact Review Board
Josee Gallipeau, Nunavut Wildlife Management Board
Colette Meloche, Environment Canada
Earle Baddaloo, Department of Sustainable Development
Jordan DeGroot, Department of Fisheries and Oceans

APPROVAL FOR WATER USE AND WASTE DISPOSAL

Pursuant to Article 13 of the *Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada* and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (C-33), the Nunavut Water Board, hereinafter referred to as the Board, hereby grants to the Mars Society authorization to use water and dispose of waste into water in conjunction with operation of the Flashline Mars Arctic Research Station on Devon Island subject to the terms and conditions outlined herein and in the applicable land use permits.

APPLICATION NO:	NWB6MAR0305
LICENSEE:	Mars Society 11111 8 th Ave. W, Unit A Lakewood, CO 80215 Tel: (303) 980-0890 Fax: (303) 980-0753 E-mail: zubrin@aol.com
START DATE:	June 20, 2003
EXPIRY DATE:	December 31, 2005
PURPOSE:	Water Use and Waste Disposal Associated with Camp Operations
LOCATION:	Haughton Crater, Devon Island, Nunavut Location: Latitude: 75°26'N Longitude: 89°50'W NTS Map #: 58/H

This approval issued and recorded at Gjoa Haven includes and is subject to the annexed conditions.



Philippe di Pizzo
Executive Director

PART A: SCOPE, DEFINITIONS & ENFORCEMENT

1. Compliance with the terms and conditions of this approval does not absolve the Licensee from responsibility for compliance with all applicable legislation, guidelines, or directives.
2. This approval is issued subject to the conditions contained herein with respect to the taking of water and the depositing of waste of any type in any waters or in any place under any conditions where such waste or any other waste that results from the deposits of such waste may enter any waters, and with respect to any other impacts of the Licensee's activities on water quality, quantity or flow, including surface drainage.
3. Definitions:

"Combustible waste" means paper, non-treated wood products, and kitchen food waste;

"Sump" means a man-made pit, trench hollow or cavity in the earth's surface used for the purpose of depositing waste material therein; and
4. The Licensee shall maintain a copy of this Licence at the sites of operation at all times.
5. Enforcement
 - i. Failure to comply with this Licence will be a violation of the *Nunavut Water and Nunavut Surface Rights Tribunal Act*, exposing the Licensee to the enforcement measures and the penalties provided for in the Act.
 - ii. All inspection and enforcement services regarding this Licence will be provided by Inspectors appointed under the *Nunavut Water and Nunavut Surface Rights Tribunal Act*.
 - iii. Inspectors appointed under the *Nunavut Water and Nunavut Surface Rights Tribunal Act* enjoy-with respect to this Licence, and for the purpose of enforcing this Licence, and with respect to the use of water and deposit or discharge of waste by the licensee-all powers, privileges and protections that are conferred upon them by the *Nunavut Water and Nunavut Surface Rights Tribunal Act* or by other applicable law.

PART B: GENERAL CONDITIONS

1. The Licensee shall file a report with the Board no later than March 31 of the year following the calendar year reported, which shall contain the following information:
 - i. A summary report of water use and waste disposal activities;
 - ii. A list of unauthorized discharges and a summary of follow-up actions taken;
 - iii. Revisions to the Spill Contingency Plan and/or Abandonment and Restoration Plan;
 - iv. Progressive reclamation work undertaken;
 - v. Any other details on water use or waste disposal requested by the Board by November 1 of the year being reported.
2. The NWB shall be notified of any changes in operating plans or conditions associated with this project at least thirty (30) days prior to any such change.

PART C: CONDITIONS FOR THE USE AND PROTECTION OF WATER

1. The Licensee shall obtain water for domestic purposes from the small unnamed creek 300 m northwest of the camp, up to a maximum volume of 100 cubic metres per day.
2. If applicable, the Licensee shall equip all water intake hoses with a screen with an appropriate mesh size to ensure that there is no entrainment of fish.
3. The Licensee shall not remove any material from below the ordinary high water mark of any water body.
4. The Licensee shall not do anything that will cause erosion of the banks of any body of water on or adjacent to the land and shall provide necessary controls to prevent such erosion.
5. Sediment and erosion control measures shall be implemented prior to and maintained during the operation to prevent entry of sediment into water.

PART D: CONDITIONS APPLYING TO WASTE DISPOSAL

1. Areas designated for waste disposal that may impair the quality, quantity, or flow of water shall not be located within thirty (30) metres of the ordinary high water mark of any water body, unless otherwise authorized by the Board.
2. The Licensee shall incinerate all sewage and combustible waste, and shall ensure that all hazardous wastes, waste oil and non-combustible waste generated through the course of the operation are backhauled and disposed of in an approved waste disposal site.
3. The Licensee shall ensure that all greywater is disposed of in a properly constructed sump or an appropriate natural depression located at least thirty (30) metres from the high water mark of any adjacent water body, where direct flow into a water body is not possible and no additional impacts are created.

PART E: CONDITIONS FOR CAMPS AND ACCESS INFRASTRUCTURES

1. The Licensee shall not erect camps or store material on the surface of frozen streams or lakes except what is for immediate use. Camps shall be located such as to minimize impacts on surface drainage.
2. All activities shall be conducted in such a way as to minimize impacts on surface drainage and the Licensee shall immediately undertake any corrective measures in the event of any impacts on surface drainage.
3. With respect to access road and pad construction or other earthworks, the deposition of debris or sediment into any water body is prohibited. These materials shall be disposed of above the high water mark in such a fashion that they do not enter the water.

PART F: CONDITIONS APPLYING TO SPILL PREVENTION AND CONTINGENCY PLANNING

1. The Licensee shall revise the approved Spill Contingency Plan, to reflect the following:
 - i. The addition of DIAND and Environment Canada personnel to to the spill response contact list in Nunavut;
 - ii. The inclusion of the Spill Report Form ;

- iii. The location (including GPS co-ordinates) of all fuel storage areas associated with the undertaking.
- 2. The revision data requested in Part F, Item 1 shall be submitted to the Board within 30 days of issuance of the licence. The information may be submitted as an addendum to the original March 2003 plan in accordance with Part B, Item 1(iii).
- 3. The Licensee shall revise their Spill Contingency Plan annually to reflect changes in personnel, operations and/or technology or as directed by the Board.
- 4. The Licensee shall ensure that any chemicals, fuel or wastes associated with the project do not enter water. All sumps and fuel caches shall be located a minimum of thirty (30) metres from the normal high water mark of any adjacent water body.
- 5. If, during the duration of this Licence, an unauthorized discharge of waste occurs, or if such a discharge is foreseeable, the Licensee shall:
 - i. Employ the Spill Contingency Plan;
 - ii. Report the spill immediately to the 24-Hour Spill Line at (867) 920-8130 and to the DIAND Water Resources Inspector at (867) 975-4298; and
 - iii. Submit to the DIAND Water Resources Inspector a detailed report, including the GPS location, on each occurrence no later than thirty (30) days after initially reporting the event.

PART G: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION

- 1. The Licensee shall submit to the Board for approval, within six (6) months of issuance of this Licence, an Abandonment and Restoration Plan prepared in accordance with applicable sections of the *Guidelines for Abandonment and Restoration Planning for Mines in the Northwest Territories (1990)*.
- 2. The Plan referred to in Part G, Item 1 shall be revised annually to reflect changes in operation and/or technology. Any changes may be submitted in addendum to an approved plan in accordance with Part B, Item 1(iii).
- 3. If not approved by the Board, the plan referred to in Part G, Item 1 shall be revised and resubmitted.
- 4. The Licensee shall backfill, and restore to the satisfaction of the Inspector, all sumps to the pre-existing contours of the land prior to the expiry of this permit.

5. The Licensee shall undertake progressive restoration for any components of the project no longer required for the Licensee's operations.
6. All disturbed areas shall be stabilized and re-vegetated as required, upon completion of work, and restored to a pre-disturbed state.

**GENERAL CONDITIONS FOR THE ADMINISTRATION OF LICENCES
ISSUED BY THE NUNAVUT WATER BOARD (NWB)**

The following conditions form an integral part of Licence No. **NWB6MAR0305**:

1. At the time of issuance, a copy of the Licence is placed on the Water Register in the NWB Head Office in Gjoa Haven. **Documents in the Register are available to the public.**
2. If the Licensee contemplates the renewal of Licence No. **NWB6MAR0305**, it is its responsibility to apply to the NWB for its renewal. The past performance of the Licensee, new documentation and information, and issues raised during a public hearing, if the NWB is required to hold one, will be used to determine the terms and conditions of the Licence renewal. Note that if the Licence expires before the NWB issues a new one, then water use and waste disposal **must cease**, or the Licensee will be in contravention of the Nunavut Land Claims Agreement. The NWB recommends that an application for the renewal of Licence No. **NWB6MAR0305** be filed **at least three months** before the Licence's expiry date.
3. If Licence No. **NWB6MAR0305** requires an amendment, **a public hearing may be required**. The Licensee should submit applications for amendment as soon as possible to give the NWB sufficient time to go through the amendment process. The process may vary depending on the scope of the amendment requested.
4. Any communication with respect to this Licence shall be made **in writing** to the attention of:
 - (i) **Chief Administrative Officer:**
 Executive Director
 Nunavut Water Board
 P. O. Box 119
 Gjoa Haven, NU X0B 1J0
 Telephone: (867) 360-6338
 Fax: (867) 360-6369
 - (ii) **Inspector Contact:**
 Water Resources Officer
 Nunavut District, Nunavut Region
 P.O. Box 100
 Iqaluit, NU X0A 0H0
 Telephone: (867) 975-4298
 Fax: (867) 979-6445
5. The Licensee shall submit one paper copy and one electronic copy of all reports, studies, and plans to the Board. **Reports or studies submitted to the Board by the Licensee shall include a detailed executive summary in Inuktitut.**