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NUNAVUT WATER BOARD

NUNAVUT IMALIRIYIN KATIMAYINGI

## DECISION

### LICENCE NUMBER: NWB2FER0507 -Type “B”

This is the decision of the Nunavut Water Board (NWB) with respect to an application for a renewal of Licence dated February 23, 2005 made by:

#### STARFIELD RESOURCES INC.

to allow for the use of water and disposal of waste during camp operations and exploration drilling operations at the Ferguson Lake Project located within the Kivalliq Region, Nunavut (camp located at latitude 62°52.64’N and longitude 96°50.72’W).

## DECISION

After having been satisfied that the application was in conformity with the applicable Land Use Plan and exempt from the requirement for screening by the Nunavut Impact Review Board in accordance with Schedule 12.1, Paragraph 5 of the *Nunavut Land Claim Agreement* (NLCA), the NWB decided that the application could proceed through the regulatory process. In accordance with S.55.1 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSRTA) and Article 13 of the NLCA, public notice of the application was given and interested persons were invited to make representations to the NWB.

After reviewing the submission of the Applicant and representations made by interested persons, the NWB, having given due regard to the facts and circumstances, the merits of the submissions made to it and to the purpose, scope and intent of the NLCA and of the NWNSRTA, decided to waive the requirement to hold a public hearing and furthermore to delegate its authority to approve the application to the Chief Administrative Officer pursuant to S. 13.7.5 of the NLCA and S. 49(a) of the NWNSRTA and determined that:

**Licence Number NWB2FER0507 -Type “B” be issued subject to the terms and conditions contained therein. (Motion #: 2005-14)**

SIGNED this 27th day of June 2005 at Gjoa Haven, NU.

*Original signed by:*

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Philippe di Pizzo  
Chief Administrative Officer

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## **I. INTRODUCTION**

On February 23, 2005, a water licence application was filed with the Nunavut Water Board by Starfield Resources Inc. for water use and waste disposal activities during camp operations and drilling operations at the Ferguson Lake Project located within the Kivalliq Region, Nunavut (camp located at latitude 62°52.64'N and longitude 96°50.72'W). This application was supplemented with additional information with respect to Spill Contingency Planning and Abandonment and Restoration Planning by the Licensee on April 5, 2005.

After having been satisfied that the application was exempt from the requirement for screening by the Nunavut Impact Review Board in accordance with Schedule 12.1, Paragraph 5 of the *Nunavut Land Claim Agreement (NLCA)*, the NWB decided that the application could proceed through the regulatory process.

In accordance with S.55.1 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act (NWNSRTA)* and Article 13 of the *NLCA*, public notice of the application was given and interested persons were invited to make representations to the NWB. No public concerns were expressed, and after reviewing the submission of the Applicant and representations made by interested persons, the NWB, having given due regard to the facts and circumstances, the merits of the submissions made to it and to the purpose, scope and intent of the *NLCA* and of the *NWNSRTA*, decided to waive the requirement to hold a public hearing and furthermore to delegate its authority to approve the application to the Chief Administrative Officer pursuant to S.13.7.5 of the *NLCA* and S.49(a) of the *NWNSRTA*.

## **II. GENERAL CONSIDERATIONS**

### **A. Term of the Licence**

In accordance with the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* S. 45, the NWB may issue a licence for a term not exceeding twenty-five years. The NWB believes that a term of approximately two years is appropriate. The licence term will allow the Licensee to properly carry out the terms and conditions of the licence and will ensure that sufficient time is given to permit the Licensee revise, submit and implement the plans required under the licence to the satisfaction of the NWB.

### **B. Annual Report**

The requirements imposed on the Licensee in this licence are for the purpose of ensuring that the NWB has an accurate annual update of water use and depositions of waste during a calendar year. This information is maintained on the public registry and is available to any interested parties upon request.

### **C. Spill Contingency Planning**

The Board generally requires that all Licensees prepare a comprehensive Spill Contingency Plan to establish a state of readiness to ensure a prompt and effective response to possible spills or system failure events. The site-specific spill contingency plan will assist the Licensee in responding to emergencies such that the impacts to water in particular and the environment and public health in general are minimized. The Licensee is required to revise the Plan and submit for approval by the Board as per Part H, Item 1 of this license.

### **D. Abandonment and Restoration (A&R)**

To ensure that all facilities are reclaimed in an appropriate manner upon abandonment, the NWB requires Licensees to prepare and submit an Abandonment and Restoration Plan. The Licensee is required to revise the Plan and submit for approval by the Board as per Part I, Item 1 of this Licence.

**LICENCE NWB2FER0507 –Type “B”**

Pursuant to the *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

**STARFIELD RESOURCES INC.**

of \_\_\_\_\_  
(Licensee)

**420-625 HOWE STREET, VANCOUVER, BC V6C 2T6**

(Mailing Address)

hereinafter called the Licensee, the right to alter, divert or otherwise use water for a period subject to restrictions and conditions contained within this licence:

**NWB2FER0507 - Type “B”**

Licence Number \_\_\_\_\_

**NUNAVUT 06**

Water Management Area \_\_\_\_\_

**FERGUSON LAKE PROJECT, KIVALLIQ REGION, NUNAVUT**

Location \_\_\_\_\_

**WATER USE AND WASTE DISPOSAL**

Purpose \_\_\_\_\_

**MINING AND MILLING – TYPE “B”**

Classification of Undertaking \_\_\_\_\_

**95 CUBIC METRES DAILY**

Quantity of Water Not to Exceed \_\_\_\_\_

**JUNE 27, 2005**

Date of Licence \_\_\_\_\_

**JULY 1, 2007**

Expiry Date of Licence \_\_\_\_\_

Dated this 27th day of June 2005 at Gjoa Haven, NU.

*Original signed by:*

\_\_\_\_\_  
Philippe di Pizzo  
Chief Administrative Officer

## **PART A: SCOPE AND DEFINITIONS**

### **1. Scope**

This Licence allows for the use of water and the disposal of waste for an undertaking classified as Mining and Milling at the Ferguson Lake Project, located approximately 180km south of Baker Lake and 240km west of Rankin Inlet within the Kivalliq Region, Nunavut (camp located at latitude 62°52.64'N and longitude 96°50.72'W);

- i. This Licence 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. Whenever new Regulations are made or existing Regulations are amended by the Governor in Council under the Nunavut Waters and Nunavut Surface Rights Tribunal Act, or other statutes imposing more stringent conditions relating to the quantity or type of waste that may be so deposited or under which any such waste may be so deposited, this Licence shall be deemed, upon promulgation of such Regulations, to be subject to such requirements; and;
- ii. Compliance with the terms and conditions of this Licence does not absolve the Licensee from responsibility for compliance with the requirements of all applicable Federal, Territorial and Municipal legislation.

### **2. Definitions**

In this Licence: **NWB2FER0507 -Type “B”**

**“Act”** means the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*;

**“Amendment”** means a change to original terms and conditions of this licence requiring correction, addition or deletion of specific terms and conditions of the licence; modifications inconsistent with the terms of the set terms and conditions of the Licence;

**“Appurtenant Undertaking”** means an undertaking in relation to which a use of waters or a deposit of waste is permitted by a licence issued by the Board;

**“Board”** means the Nunavut Water Board established under the *Nunavut Land Claims Agreement* and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*;

**“Chief Administrative Officer”** means the Executive Director of the Nunavut Water Board;

**“Engineer”** means a professional engineer registered to practice in Nunavut in

accordance with the Engineering, Geological and Geophysical Act (Nunavut) S.N.W.T. 1998, c.38, s.5;

**“Greywater”** means all liquid wastes from showers, baths, sinks, kitchens and domestic washing facilities, but does not include toilet wastes;

**“Inspector”** means an Inspector designated by the Minister under Section 85 (1) of the *Act*;

**“Licensee”** means the holder of this Licence

**“Modification”** means an alteration to a physical work that introduces a new structure or eliminates an existing structure and does not alter the purpose or function of the work, but does not include and expansion;

**“Nunavut Land Claims Agreement” (NLCA)** means the *“Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada”*, including its preamble and schedules, and any amendments to that agreement made pursuant to it;

**“Sewage”** means all toilet wastes and greywater;

**“Spill Contingency Plan”** means a Plan developed to deal with unforeseen petroleum and chemical events that may occur during the operations conducted under the Licence;

**“Toilet Wastes”** means all human excreta and associated products, but does not include greywater;

**“Waste”** means, as defined in S.4 of the *Act*, any substance that, by itself or in combination with other substances found in water, would have the effect of altering the quality of any water to which the substance is added to an extent that is detrimental to its use by people or by any animal, fish or plant, or any water that would have that effect because of the quantity or concentration of the substances contained in it or because it has been treated or changed, by heat or other means;

### **3. Enforcement**

- i. Failure to comply with this Licence will be a violation of the Act, subjecting 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 Act; and
- iii. For the purpose of enforcing this Licence and with respect to the use of water and

deposit or discharge of waste by the licensee, Inspectors appointed under the Act, hold all powers, privileges and protections that are conferred upon them by the Act or by other applicable law.

## **PART B: GENERAL CONDITIONS**

1. The Water use fee shall be paid in accordance with the requirements of the Act.
2. Licensee shall file an Annual Report on the appurtenant undertaking with the Board not later than March 31st of the year following the calendar year being 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 Abandonment and Restoration Plan;
  - iv. Progressive reclamation work undertaken; and
  - v. Any other details on water use or waste disposal requested by the Board by November 1 of the year being reported.
3. The Licensee shall notify the NWB of any changes in operating plans or conditions associated with this project at least thirty (30) days prior to any such change.
4. The Licensee shall install flow meters or other such devices, or implement suitable methods required for the measuring of water volumes, to be operated and maintained to the satisfaction of an Inspector.
5. If the Licensee contemplates the renewal of Licence No. NWB2FER0507, it is the responsibility of the Licensee 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. NWB2FER0507 be **filed at least three months before the Licence expiry date.**
6. If Licence No. NWB2FER0507 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

7. The Licensee shall ensure a copy of this Licence is maintained at the site of operations at all times. 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

8. 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.

**PART C: CONDITIONS APPLYING TO WATER USE**

1. The Licensee shall obtain water for domestic use from Ferguson Lake, approximately 600 metres from the camp, up to a maximum of 5 cubic metres per day. Water use for drilling operations shall be obtained from Ferguson Lake and other local water sources and is not to exceed 90 cubic meters per day.
2. If the drilling requires water in sufficient volume that the source water body may be drawn down the Licensee shall, at least 30 days prior to commencement of drilling, submit to the Board for approval the following: volume required, hydrological overview of the water body, details of impacts, and proposed mitigation measures. The use of streams is not recommended as a water source.
3. The Licensee shall equip all water intake hoses with a screen of an appropriate mesh size to ensure that there is no entrainment of fish and shall withdraw water at a rate such that

fish do not become impinged on the screen.

4. The Licensee shall not remove any material from below the ordinary high water mark of any water body.
5. The Licensee shall not do anything that will cause erosion to the banks of any body of water and shall provide necessary controls to prevent such erosion.
6. 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. The Licensee shall locate areas designated for waste disposal at least thirty (30) metres above the ordinary high water mark of any water body such that the quality, quantity or flow of water is not impaired, unless otherwise authorized by the Board.
2. No open burning or on-site land filling of domestic waste is permitted.
3. The Licensee shall incinerate all 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.
4. The Licensee shall contain all greywater in a sump located at least thirty (30) metres above the ordinary high water mark of any water body, at a site where direct flow into a water body is not possible and no additional impacts are created.
5. The Licensee shall contain all sewage by use of Propane Incineration toilets with the ashes re-burnt in the Camp Incinerator unit. Ashes and any remaining residue generated through the course of the operation are to be backhauled and disposed of in an approved waste disposal site.

**PART E: CONDITIONS FOR CAMPS, ACCESS INFRASTRUCTURES and OPERATIONS**

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. Winter lake and stream crossings, including ice bridges, shall be constructed entirely of water, ice or snow; stream crossings shall be removed or notched prior to spring breakup.
4. With respect to access road, 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 ordinary high water mark in such a fashion that they do not enter the water.

#### **PART F: CONDITIONS APPLYING TO DRILLING OPERATIONS**

1. The Licensee shall not conduct any land based drilling within thirty (30) metres of the ordinary high water mark of any water body, unless otherwise approved by the Board.
2. The Licensee shall ensure that all drill cuttings and any return water and sludge that cannot be re-circulated, including CaCl in any quantity or concentration, be disposed of in a properly constructed sump or an appropriate natural depression located at least thirty (30) metres above the ordinary high water mark of any adjacent water body, where direct flow into a water body is not possible and no additional impacts are created.
3. Drilling additives or mud shall not be used in connection with holes drilled through lake ice unless they are re-circulated or contained such that they do not enter the water, or are demonstrated to be non-toxic.
4. If artesian flow is encountered, drill holes shall be plugged and permanently sealed upon project termination.
5. For all on-ice drilling operations the Licensee shall follow the *Interim Guidelines for On-Ice Drilling in the NWT*. These are:
  - i. All drill cuttings shall be removed from the ice surface;
  - ii. The release of total suspended solids in the receiving environment shall be in compliance with the Guidelines for Total Suspended Solids contained in the *Canadian Council of Ministers of the Environment's (CCME) Canadian Water Quality Guidelines, Chapter 3 - Freshwater Aquatic Life*; and
  - iii. For kimberlite targets, non-toxicity must be demonstrated; toxicity testing shall be done on the effluent from the drilling operation and the results shall be submitted to the Nunavut Water Board and/or an Inspector upon request.

6. The Licensee shall establish baseline water quality conditions before drilling through lake ice and the results shall be submitted to the Nunavut Water Board and/or an Inspector upon request.

#### **PART G: CONDITIONS APPLYING TO MODIFICATIONS**

1. The Licensee may, without written consent from the Board, carry out Modifications to the Water Supply Facilities and Waste Disposal Facilities provided that such Modifications are consistent with the terms of this License and the following requirements are met:
  - i. the Licensee has notified the Board in writing of such proposed Modifications at least sixty (60) days prior to beginning the Modifications;
  - ii. such Modifications do not place the Licensee in contravention of the License or the Act;
  - iii. the Board has not, during the sixty (60) days following notification of the proposed Modifications, informed the Licensee that review of the proposal will require more than sixty (60) days; and
  - iv. the Board has not rejected the proposed Modifications.
2. Modifications for which all of the conditions referred to in Part G, Item 1 have not been met can be carried out only with written approval from the Board.
3. The Licensee shall provide as-built plans and drawings of the Modifications referred to in this License within ninety (90) days of completion of the Modification. These plans and drawings shall be stamped by an Engineer.

#### **PART H: CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING**

1. The Licensee shall, within sixty (60) days of issuance of this licence, submit to the Board a revised Spill Contingency Plan that is to include the following:
  - i. The 24 hour contact information for the person in charge of the operation, who can activate the spill plan on site. This person should be one that is on site and is capable of coordinating a timely and effective response;
  - ii. The name, address and contact number of the employer, if different than the

person in charge. This is the person ultimately responsible for the facility, usually the owner;

- iii. A more detailed description of the project area making sure to include the location, size and storage capacity of all facilities;
  - iv. A site map that is of suitable scale and large enough to include the location of the facility, nearby buildings, fuel storage, spill kit locations, roads, culverts, drainage patterns showing likely path of contaminant flow and nearby bodies of water (sensitive areas);
  - v. Date the Plan was prepared and the effective period of the Plan;
  - vi. Description of spill response training provided to the on-site personnel;
  - vii. A revised emergency contact listing to include corrected phone numbers and additional contact information for the DIAND Inspector, Spill Report Line Fax, Environment Canada (Iqaluit), Nunavut Water Board, local HTA and RCMP, additional equipment access from local communities and spill containment suppliers;
  - viii. A copy of the NWT Spill Report Form;
  - ix. notification of the DIAND Water Resources Inspector at (867) 975-4298 following the occurrence of any spill of chemicals, petroleum products or waste associated with the project; and
  - x. up-to-date MSDS information for major petroleum or chemical products to be stored on-site.
- 2. If the Plan referred to in Part H, Item 1 is not approved, the Licensee shall make the necessary revisions and resubmit the plan revision within thirty (30) days following notification from the Board.
  - 3. The Licensee shall annually review the approved Spill Contingency Plan and modify as necessary to reflect changes in personnel, operations and/or technology. Any proposed modifications shall be submitted to the Board as an addendum to the original plan in accordance with Part B, Item 2(iii).
  - 4. The Licensee shall ensure that any chemicals, petroleum products or wastes associated with the project do not enter water. All sumps and fuel caches shall be located a minimum of thirty (30) metres above the ordinary high water mark of any adjacent water body and inspected on a regular basis. The Licensee is encouraged to use some form of secondary containment.

5. The Licensee shall ensure that any equipment maintenance and servicing be conducted only in designated areas and shall implement special procedures (such as the use of drip pans and absorbent mats) to manage fluids, waste and contain potential spills.
6. If during the term 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 on each occurrence, a detailed report including the GPS location, no later than thirty (30) days after initially reporting the event.

**PART I: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION**

1. The Licensee shall submit to the Board for approval within sixty (60) days of issuance of this Licence, a revised 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. If the Plan referred to in Part I, Item 1 is not approved by the Board, the Licensee shall revise the Plan and resubmit within sixty (60) days following notification from the Board.
3. The Licensee shall annually review the Plan referred to in Part I, Item 1 and if needed, modify the Plan to reflect changes in operation and/or technology. Revisions shall be submitted with the Annual Report as an addendum to the Plan for the approval of the Board.
4. The Licensee shall implement the Abandonment and Restoration Plan as approved.
5. The Licensee shall complete the restoration work within the time schedule specified in the approved Plan, or as subsequently revised and approved by the Board.
6. The Licensee shall endeavor to carry out progressive reclamation for any components of the project no longer required for the Licensee's operations.

7. The Licensee shall backfill and restore, to the satisfaction of an Inspector, all camp and drilling waste disposal sumps to the pre-existing natural contours of the land prior to the expiry of this Licence.
8. The Licensee shall store drill core, produced by the appurtenant undertaking, in an appropriate manner and location at least thirty (30) metres above the ordinary high water mark of any adjacent water body, where any direct flow into a water body is not possible and no additional impacts are created.
9. All disturbed areas shall be stabilized and re-vegetated as required, upon completion of work, and restored to a pre-disturbed state.

**PART J: CONDITIONS APPLYING TO THE MONITORING PROGRAM**

1. The Licensee shall measure and record in cubic metres the daily quantities of water utilized for camp operations and drilling operations, for all purposes.
2. The Licensee shall determine the GPS co-ordinates (in degrees, minutes and seconds of latitude and longitude) of all locations where sources of water are utilized for all purposes.
3. The Licensee shall determine the GPS co-ordinates (in degrees, minutes and seconds of latitude and longitude) of all locations where wastes associated with camp operations and drilling operations are deposited.
4. Additional sampling and analysis may be requested by an Inspector.
5. The Licensee shall include all of the data and information required by the “Monitoring Program” in the Licensee's Annual Report, as required per Part B, Item 2.
6. Modifications to the Monitoring Program may be made only upon written approval of the Chief Administrative Officer.