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NUNAVUT WATER BOARD

NUNAVUT IMALIRIYIN KATIMAYINGI

## EXPLORATION/ REMOTE CAMP SUPPLEMENTARY QUESTIONNAIRE

Applicant: Starfield Resources Ltd.

Licence No: \_\_\_\_\_

(For NWB Use Only)

### ADMINISTRATIVE INFORMATION

1. Environment Manager: Rescan Environmental Services Ltd. Tel: (604) 689-9460  
Fax: (604) 687-4277, Contact : Francois Landry E-mail: flandry@rescan.com
2. Project Manager: Bruce Ballantyne Tel: (416) 860-0400 Fax: (416) 860-0822 E-mail: sball@rocketmail.com
3. Does the applicant hold the necessary property rights?  
**Yes**
4. Is the applicant an 'operator' for another company (i.e., the holder of the property rights)?  
If so, please provide letter of authorization.  
**No**
5. Duration of the Project  
[ ] Annual  
[X] Multi Year:  
If Multi-Year indicate proposed schedule of on site activities  
Start: July 1, 2007 Completion: Ongoing

### CAMP CLASSIFICATION

6. Type of Camp  
[ ] Mobile (self-propelled)  
[ ] Temporary  
[ ] Seasonally Occupied: \_\_\_\_\_  
[X] Permanent  
[ ] Other: \_\_\_\_\_
7. What is the design population of the camp and the maximum population expected on site at one time? What will be the fluctuations in personnel?  
**The camp has been designed to populate on average 30 people. In the event that additional drills are brought to site, the camp could populate up to 60 people.**
8. Provide history of the site if it has been used in the past.  
**This site was chosen in cooperation with the Kivalliq Inuit Association. The camp was constructed in 2006.**

Starfield Resources Inc. (Starfield) is exploring a significant nickel, copper and platinum group metals deposit located in an area of Inuit Owned Lands at Ferguson Lake in Nunavut. The mineral deposit was discovered in the 1950s and has been extensively explored by Inco Ltd., Esso Minerals Canada and Homestake Mineral Development Company prior to being acquired by Starfield. This exploration has identified a 15 km long trend of mineralization that surfaces on both sides of the lake and has been tested by drilling under the lake and from the land surface. Starfield is concentrating on the western end of this trend.

Recent exploration has used the privately-owned Ferguson Lake Fishing Lodge located on an island in Ferguson Lake as a base camp. The new camp, located on the mainland, is safer and provides more convenient access to the current exploration areas and allows for potential expansion as activity on the site increases. The proposed camp site has been selected to serve the longer term needs of the project.

## CAMP LOCATION

9. Please describe proposed camp location in relation to biogeographical and geomorphological features, and water bodies.  
**The camp is located on the West shore of Ferguson Lake. This location was chosen with the Kivalliq Inuit Association based on the proximity to the area of interest for the project and the ability to draw fresh water for the camp. See the attached Figure. The camp site is situated on a low ridge at an elevation between 120 and 130 m. The nearest water body is a small pond approximately 300 m south of the camp site.**
10. How was the location of the camp selected? Was the site previously used? Was assistance from the Regional Inuit Association Land Manager sought? Include maps and/or aerial photographs.  
**The location of the camp was chosen with the Kivalliq Inuit Association. See the attached Figure and photos.**
11. Is the camp or any aspect of the project located on:  
[ ] Crown Lands Permit Number (s)/Expiry Date: \_ \_  
[ ] Commissioners Lands Permit Number (s)/Expiry Date: \_\_\_\_\_  
[ X ] Inuit Owned Lands Permit Number (s)/Expiry Date: **KVL399C150**
12. Closest Communities (distance in km):  
**Please see the attached Figure of the project site within a regional context indicating the distance to the closest communities.**
13. Has the proponent notified and consulted the nearby communities and potentially interested parties about the proposed work?  
**Please see the attached community consultation log.**
14. Will the project have impacts on traditional water use areas used by the nearby communities? Will the project have impacts on local fish and wildlife habitats?  
**No impacts are anticipated.**

## PURPOSE OF THE CAMP

15. ☒ Mining – **Exploration – drilling, soil sampling, mapping, geophysical surveys**  
☐ Tourism (hunting, fishing, wildlife observation, adventure/expedition, etc.)

(Omit questions # 16 to 21)

○Other \_\_\_\_\_ (Omit questions # 16 to 22)

16.           ○ Preliminary site visit  
              Ⓢ Prospecting  
              Ⓢ Geological mapping  
              Ⓢ Geophysical survey  
              Ⓢ Diamond drilling  
              ○ Reverse circulation drilling  
              ○ Evaluation Drilling/Bulk Sampling (also complete separate questionnaire)  
              ○ Other: \_\_\_\_\_

17.   Type of deposit:

- Lead Zinc  
              ○ Diamond  
              ○ Gold  
              ○ Uranium  
              Ⓢ Other: Base metals – Nickel, copper and platinum

### **DRILLING INFORMATION**

18.   Drilling Activities

- Ⓢ Land Based drilling  
              Ⓢ Drilling on ice

19.   Describe what will be done with drill cuttings?

**All drill cuttings will be pumped to a sump that will be located a minimum of 31 metres from the normal high water mark of any water body.**

20.   Describe what will be done with drill water?

**All drilling fluids will be treated in sumps to collect cuttings, allowing the water to drain into the surrounding landscape.**

21.   List the brand names and constituents of the drill additives to be used? Includes MSDS sheets and provide confirmation that the additives are non-toxic and biodegradable.

**Please see attached Spill Contingency Plan, Appendix III– MSDS Sheets**

22.   Will any core testing be done on site? Describe.

**Core will be examined at site, not tested.**

### **SPILL CONTINGENCY PLANNING**

23.   Does the proponent have a spill contingency plan in place? Please include for review.

**Yes there is a Spill Contingency Plan in place. It is attached to this application for review.**

24.   How many spill kits will be on site and where will they be located?

**There will be six movable spill kits at camp, one at the drill and one at each fuel cache location. In addition there will also be a minimum of one empty fuel drum located at each fuel cache for use in the event of a leaking or damaged fuel drum. Additional spill pads**

**will be available at each fuel cache. As well, spill pads will be stored in closed pails and located behind the tents at camp.**

25. Please describe the types, quantities, and method of storage of fuel and chemicals on site, and provide MSDS sheets.

**Please refer to the attached Spill Contingency Plan, Appendix III– MSDS Sheets, attached with this application.**

**Only monthly supplies of fuel will be stored on the camp site.**

Fuel Type	Container Type	Container Capacity	Total Volume to be Stored On-Site
P-50	Barrels	205L	15,375 L
Gasoline	Barrels	205L	112,750 L
Jet-B	Barrels	205L (sealed)	568 L
Propane	Pressured Tanks	100lb Tanks	100lbs

## **WATER SUPPLY AND TREATMENT**

26. Describe the location of water sources.

**Water for the camp will be from Ferguson Lake. Numerous lakes are readily available for land-based drilling. These locations will be provided once the drill program is finalized and targets identified.**

27. Estimated demand:

- ⊗ Domestic Use: 10 cubic m/day Water Source: Ferguson Lake
- ⊗ Drilling Units: 90 cubic m/day Water Source: small lakes, see map
- Other: \_\_\_\_\_ Water Source: \_\_\_\_\_

28. Describe water intake for camp operations? Is the water intake equipped with a mesh screen to prevent entrapment of fish? Describe:

**The water intake for camp will be facilitated using a submersible pump with a filtered intake that complies with DFO guidelines for screens to prevent the entrainment of fish.**

29. Will drinking water quality be monitored? What parameters will be analyzed and at what frequency?

**Bottled water is brought to site for drinking.**

30. Will drinking water be treated? How?

**Drinking water is brought to site.**

31. Will water be stored on site?

**Water for domestic purposes other than drinking is stored in tanks on site.**

## **WASTE TREATMENT AND DISPOSAL**

32. Describe the characteristics, quantities, treatment and disposal methods for:

- ⊗ Camp Sewage (blackwater) –  
- **disposal method – pacto toilets**

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- ⊗ Camp Greywater – **3-5 cubic metres/day**  
- **disposal method - sump**

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- ⊗ Solid Waste – **minimal amount anticipated**  
- **disposal method – incineration if appropriate or removed from site**

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- ⊗ Bulky Items/Scrap Metal – **minimal amount anticipated**  
- **disposal method – removed from site**

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- ⊗ Waste Oil/Hazardous Waste – **minimal**  
- **removed from site – shipped to an approved waste disposal facility. A waste manifest will accompany the transportation of all hazardous and waste oil materials. See the Spill Contingency Plan for more details.**

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- ⊗ Empty Barrels/Fuel Drums  
- **removed from site on a regular basis**

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- Other:

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33. Please describe incineration system if used on site. What types of wastes will be incinerated?  
**Starfield is purchasing a double-chambered incinerator for the camp. It will be used to dispose of domestic wastes from the kitchen and camp facilities.**
34. Where and how will non-combustible waste be disposed of ? If in a municipality in Nunavut, has authorization been granted?  
**Non-combustible, inert waste will be removed from site and taken to Rankin Inlet. Starfield Resources has an agreement with Rankin Inlet for the disposal of waste.**
35. Describe location (relative to water bodies and camp facilities) dimensions and volume, and freeboard for sumps (if applicable).  
**All sumps will be located at a minimum of 31 metres from the normal high water mark of any water body including streams. A 12m x 12m x1m sump will be dug in well drained soils within 100 m of the camp, again this sump will be located well away from the 30 m required distance from the normal high water mark of any water body.**

36. Will leachate monitoring be done? What parameters will be sampled and analyzed, and at what frequency?  
**Visual inspections of drill sumps will be conducted prior to leaving the drill hole and at the end of the field season. Monthly sampling will be conducted for faecal coliforms and quarterly sampling for BOD and suspended solids.**  
**In the event that any leaching is observed, the DIAND Water Resource Officer will be contacted immediately.**

## OPERATION AND MAINTENANCE

37. Have the water supply and waste treatment and disposal methods been used and proven in cold climate? What known O&M problems may occur? What contingency plans are in place?  
**The treatment and disposal methods being proposed are currently in practice across the north and follow the regulated guidelines and accepted methods. The current contingency plan at this time is mitigation (safe distance for disposal in sumps, shipping off site any hazardous chemicals/scrap metal/non-combustible waste, etc.) and monitoring. Should there be any concerns, the DIAND Water Resource Officer will be notified immediately.**

## ABANDONMENT AND RESTORATION

38. Provide a detailed description of progressive and final abandonment and restoration activities at the site.  
**Please see attached “Abandonment & Restoration Plan”.**

## BASELINE DATA

39. Has or will any baseline information be collected as part of this project? Provide bibliography.
- ☒ Physical Environment (Landscape and Terrain, Air, Water, etc.)
  - ☒ Biological Environment (Vegetation, Wildlife, Birds, Fish and Other Aquatic Organisms, etc.)
  - ☐ Socio-Economic Environment (Archaeology, Land and Resources Use,
  - ☐ Demographics, Social and Culture Patterns, etc.)
  - ☐ Other:

Available studies include:

- EBA Engineering, 2002. *2001 Wildlife Baseline Studies, Ferguson Lake, Nunavut, 2001*. Prepared by EBA Engineering Consultants LTD., Yellowknife NT April 2002
- EBA Engineering, 2004. *2002 Wildlife Baseline Studies, Ferguson Lake, Nunavut, 2002*. Prepared by EBA Engineering Consultants LTD., Yellowknife NT March 2004
- Points West, 2005. *Summary of 2005 Archaeological Investigations at the Ferguson Lake Study Area*. Prepared by Points West Heritage Consulting Ltd. for Rescan Environmental Services Ltd. Vancouver, BC July 2005
- Rescan, 2003. *Preliminary Baseline Study, Ferguson Lake Project Area, 1999*. Prepared by Rescan Environmental Services Ltd. for Starfield Resources Inc., Vancouver, BC January 2003
- Rescan, 2005. *Water Baseline Sampling Program 2005*. Prepared by Rescan Environmental Services Ltd. for Starfield Resources Inc., Vancouver, BC 2005

## REGULATORY INFORMATION

40. Do you have a copy of

- ✓ Article 13 - Nunavut Land Claims Agreement
- ✓ NWB - Water Licensing in Nunavut - Interim Procedures and Information Guide for Applicants
- ✓ NWB - Interim Rules of Practice and Procedure for Public Hearings
- ✓ NWTWB - Guidelines for the Discharge of Treated Municipal Wastewater in the NWT
- ✓ NWTWB - Guidelines for Contingency Planning
- ✓ DFO - Freshwater Intake End of Pipe Fish Screen Guideline
- ✓ Fisheries Act - s.35
- ✓ RWED - Environment Protection- Spill Contingency Regulations
- ✓ Canadian Drinking Water Quality Guidelines
- ✓ Public Health Act Camp Sanitation Regulations
- ✓ Public Health Act Water Supply Regulations
- ✓ Territorial Land Use Act and Regulations

You should consult the above document, guidelines, and legislation for compliance with existing regulatory requirements.