



SCREENING DECISION

January 28, 2004

Mr. Thomas Kudloo
Chairperson, Nunavut Water Board
Gjoa Haven, NU

Dear Mr. Kudloo:

**RE: Screening Decision of the Nunavut Impact Review Board (NIRB) on Application:
NIRB: #03EA127 NWB: #NWB2FER
Ferguson Lake Project, Starfield Resources Inc.**

Authority:

Section 12.4.4 of the Nunavut Land Claim Agreement states:

Upon receipt of a project proposal, NIRB shall screen the proposal and indicate to the Minister in writing that:

- a) the proposal may be processed without a review under Part 5 or 6; NIRB may recommend specific terms and conditions to be attached to any approval, reflecting the primary objectives set out in Section 12.2.5;
- b) the proposal requires review under Part 5 or 6; NIRB shall identify particular issues or concerns which should be considered in such a review;
- c) the proposal is insufficiently developed to permit proper screening, and should be returned to the proponent for clarification; or
- d) the potential adverse impacts of the proposal are so unacceptable that it should be modified or abandoned.

Primary Objectives:

The primary objectives of the Nunavut Land Claims Agreement are set out in section 12.2.5 of the Land Claims Agreement. This section reads:

In carrying out its functions, the primary objectives of NIRB shall be at all times to protect and promote the existing and future well-being of the residents and communities of the Nunavut Settlement Area, and to protect the ecosystemic integrity of the Nunavut Settlement Area. NIRB shall take into account the well-being of the residents of Canada outside the Nunavut Settlement Area.

The decision of the Board in this case is 12.4.4 (a) **the proposal may be processed without a review under Part 5 or 6; NIRB may recommend specific terms and conditions to be attached to any approval, reflecting the primary objectives set out in Section 12.2.5;**

Reasons for Decision:

NIRB's decision is based on specific considerations that reflect the primary objectives of the Land Claims Agreement. Our considerations in making this decision included:

- storage and disposal of chemicals, fuel, garbage, sewage, and gray water, and impact of these on the ecosystem;
- the impact of noise from helicopter and exploration activities and their disturbance to wildlife and traditional users of area;
- the impact of campsite and equipment on terrain;
- the impact of exploration activities on archaeological sites or cultural landmarks in the area; and
- clean up/restoration of the camp site upon abandonment.

Terms and Conditions:

That the terms and conditions attached to this screening report will apply.

Drill Sites

1. The Licensee shall not conduct any land based drilling within thirty-one (31) metres of the normal high water mark of a water body.
2. The Licensee shall not use drilling muds or additives in connection with drill holes unless they are recirculated or contained such that they do not enter the water, or are certified to be non-toxic.
3. The Licensee shall ensure that any drill cuttings and waste water that cannot be recirculated be disposed of in a properly constructed sump or an appropriate natural depression that does not drain into a waterbody.
4. The Licensee shall ensure that drilling wastes do not enter any water body. The use of biodegradable, salt free drill additives is encouraged over non-biodegradable types.
5. The Licensee shall ensure that the release of total suspended solids in the receiving environment shall be in compliance with *Guidelines for Total Suspended Solids* contained in the *Canadian Council of Ministers for the Environment's (CCME) Canadian Water Quality Guidelines, Chapter 3 - Freshwater Aquatic Life* (i.e. 10mg/L for lakes with background level under 100mg/L, or 10% for those above 100mg/L).
6. The Licensee shall ensure that the sump/depression capacity is sufficient to accommodate the volume of waste water and any fines that are produced so that there will be no additional impacts.
7. The Licensee shall not locate any sump within thirty-one (31) metres of the normal high water mark of any water body.

8. The Licensee shall ensure that disturbance of vegetation from deposit of drill fluids/cuttings is restricted to the area of the sump and the ground prepared for revegetation upon abandonment.
9. The Licensee shall, where flowing water from bore holes is encountered, plug the bore hole in such a manner as to permanently prevent any further outflow of water. The occurrence shall be reported to the Nunavut Water Board and Land Use Inspector within 48 hours.

Fuel Storage

10. The Licensee shall ensure that fuel storage containers are not located within thirty-one (31) metres of the ordinary high water mark of any body of water.
11. The Licensee shall ensure that any chemicals, fuels or wastes associated with the project do not spread to the surrounding lands or enter into any water body.
12. The Licensee shall take all reasonable precautions to prevent the possibility of migration of spilled petroleum fuel or chemicals over the ground surface.
13. The Licensee shall examine all fuel and chemical storage containers daily for leaks. All leaks should be prepared immediately.
14. The Licensee shall seal all container outlets except the outlet currently in use.
15. The Licensee shall mark all fuel containers with the Licensee's name.
16. The Licensee shall have an approved emergency response and spill contingency plans in place prior to the commencement of the operation.
17. The Licensee shall immediately report all spills of petroleum and hazardous chemicals to the twenty four (24) hour spill report line at (867) 920-8130.

Water

18. The Licensee shall ensure that all water intake hoses are equipped with a screen with an appropriate mesh size to ensure that there is no entrapment of fish.

Waste Disposal

19. The Licensee shall not discharge or deposit any refuse substances or other waste materials in any body of water, or on the banks thereof, which will impair the quality of the waters of the natural environment.
20. The Lessee shall not bury any metal wastes.
21. The Licensee shall keep all garbage and debris in a covered metal container until disposed of.
22. The Licensee shall ensure that all wastes generated through the course of the operation are backhauled and disposed of in an approved dumpsite.

Wildlife

23. The Licensee shall ensure that there is no damage to wildlife habitat in conducting this operation.
24. The Licensee shall not feed wildlife.

25. The Licensee shall not hunt or fish, unless the appropriate permits and licenses are acquired from a GN Renewable Resources Officer.
26. The Licensee shall make every effort to prevent the unintentional harassment of polar bears, caribou, muskox and nesting or molting waterfowl at all times. It is an offense under the Wildlife Act to harass wildlife.
27. The Licensee shall ensure that aircraft pilots adhere to recommended flight altitudes of greater than 300 m above ground level as to not disturb wildlife.
28. The Licensee shall ensure that the drill sites avoid known environmentally sensitive areas (denning, nesting etc.) by a minimum of 250 metres.
29. The Licensee shall ensure compliance with Section 36 of the Fisheries Act which requires that no person shall deposit or permit the deposit of a deleterious substance on any type in water frequented by fish or in any place under any conditions where the deleterious substance may enter such a water body.
30. The harmful alteration, disruption or destruction of fish habitat is prohibited under Section 35 of the Fisheries Act. No construction or disturbance of any stream/lake bed or banks of any definable watercourse is permitted unless authorized by DFO.

Environmental

31. The Licensee shall ensure that the land use area is kept clean and tidy at all times.
32. The Licensee shall prepare the site in such a manner as to prevent rutting of the ground surface.
33. The Licensee shall be required to undertake any corrective measures in the event of any damage to the land or water as a result of the Licensee's operation.

Archaeological Sites

34. The Licensee shall follow all terms and conditions for the protection and restoration of archaeological resources as outlined by the Department of Culture, Language, Elders and Youths (CLEY) in attached letter.

Reclamation

35. The Licensee shall remove all scrap metal, discarded machinery and parts, barrels and kegs, buildings and building material upon abandonment.
36. The Licensee shall complete all clean-up and restoration of the lands used prior to the expiry date of the permit.

Other Recommendations

1. NIRB would like to encourage the proponent to hire local people and services, to the extent possible.
2. NIRB strongly advises proponents to consult with local residents regarding their activities in the region.
3. Any amendment requests deemed by NIRB to be outside the original scope of the project will be considered a new project.

Validity of Land Claims Agreement

Section 2.12.2

Where there is any inconsistency or conflict between any federal, territorial and local government laws, and this Agreement, the Agreement shall prevail to the extent of the inconsistency or conflict.

Dated Jan 29/04 at Arviat, NU

Elizabeth Copland
Elizabeth Copland, Chairperson

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November 28, 2003

Our file: 4703 001 030

Gladys Joudrey
Environmental Assessment Officer
Nunavut Impact Review Board
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Cambridge Bay, NU
Tel: 867-983-2593
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Via Facsimile

RE: NIRE 03EA127 – Starfield Resources Inc. – Ferguson Lake Project

On behalf of Environment Canada (EC), I have reviewed the information submitted with the above-mentioned application. The following specialist advice has been provided pursuant to Environment Canada's mandated responsibilities for the enforcement of the *Canadian Environmental Protection Act*, Section 36(3) of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

Starfield Resources Inc. has applied for an amendment to their water license to allow for airborne geophysics, ground geophysics, geological mappings, prospecting, sampling and staking on new property they have obtained through a joint venture with Wyn Developments Inc. The property is located 240 km west of Rankin Inlet and 180 km south of Baker Lake. Access to the property is by air only, or overland in winter.

Environment Canada recommends that the following conditions be applied throughout all stages of the project.

- o The proponent shall not deposit, nor permit the deposit of any fuel, chemicals, wastes or sediment into any water body. According to the *Fisheries Act*, Section 36(3), the deposition of deleterious substances of any type into water frequented by fish, or in any place under any conditions where the deleterious substance, or any other deleterious substance that results from the deposit of the deleterious substance, may enter any such water, is prohibited.
- o The application states that the program is anticipated to begin on October 15, 2003. Environment Canada would like to remind the proponent that all necessary permits and approvals must be in place prior to the start of any work.
- o The main application indicates that the completion date for the project is December 31, 2004. However, the Supplementary Questionnaire states that the project is scheduled to end in April 2005. Environment Canada requests clarification as to the actual end date for the project.
- o All sumps shall be located above the high water mark and in such a manner as to prevent the contents from entering any waterbody frequented by fish. Further, all sumps shall be backfilled and contoured to match the surrounding landscape upon completion of each field season.
- o The proponent shall ensure that any non-combustible and hazardous wastes receive proper treatment and disposal at a licensed and approved facility. This includes any wastes generated during the clean-up of any spills which may occur on site.
- o Environment Canada is pleased to see the use of absorbent underlay in areas used for fuel storage. Environment Canada recommends that in addition to methods already in

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- place, the proponent augment their spill prevention procedures by berming that areas that contain fuel and waste oil in order to help contain any spills which may occur.
- o The proponent shall not store any materials on the surface ice of lakes or streams, except that which is for immediate use.
 - o The Abandonment and Restoration portion of the supplementary questionnaire indicates that the proponent will backhaul all barrels used for fuel storage. Environment Canada recommends that the proponent also backhaul any waste oil which has not been used as an incendiary device on site.
 - o The Emergency Response Manual prepared by Major Drilling Group included with the application includes "quick reference emergency information" sheets. As these sheets provide a good overview of the necessary steps, EC recommends that these information sheets be referenced in the detailed procedural descriptions.
 - o Environment Canada recommends the use of drip pans when refueling equipment on site.
 - o All spills are to be documented and reported to the NWT 24 hour Spill Line at (867) 920-8130.

If there are any changes in the proposed project, such as the commencement of drilling operations, EC should be notified, as further review may be necessary. Please do not hesitate to contact me with any questions or comments with regards to the foregoing at (867) 975-4639 or by email at colette.meloche@ec.gc.ca.

Yours truly,




Colette Meloche
Environmental Assessment Specialist

cc: (Mike Fournier, Northern Environmental Assessment Coordinator, Environment Canada, Yellowknife)

COMMENT FORM FOR NIRB SCREENINGS

The Nunavut Impact Review Board has a mandate to protect the integrity of the ecosystem for the existing and future residents of Nunavut. In order to assess the environmental and socio-economic impacts of the project proposals, NIRB would like to hear your concerns, comments and suggestions about the following project application:

| | | | |
|--|---|---------------|---------|
| Project Title: | Ferguson Lake Project | | |
| Proponent: | Starfield Resources | | |
| Location: | Ferguson Lake 14V 0609582 E. 6973756 N. | | |
| Comments Due By: | December 4, 2003 | NIRB # | 03EA127 |
| INAC File Number: 9545-2-2-FER-G | | | |
| Indicate your concerns about the project proposal below: | | | |
| <input type="checkbox"/> no concerns | <input type="checkbox"/> traditional uses of land | | |
| <input type="checkbox"/> water quality | <input type="checkbox"/> Inuit harvesting activities | | |
| <input type="checkbox"/> terrain | <input type="checkbox"/> community involvement and consultation | | |
| <input type="checkbox"/> air quality | <input type="checkbox"/> local development in the area | | |
| <input type="checkbox"/> wildlife and their habitat | <input type="checkbox"/> tourism in the area | | |
| <input type="checkbox"/> marine life and their habitat | <input type="checkbox"/> human health issues | | |
| <input type="checkbox"/> marine mammals and their habitat | <input type="checkbox"/> other | | |
| <input type="checkbox"/> fish and their habitat | | | |
| <input type="checkbox"/> heritage resources in area | | | |
| Please describe concerns indicated above: | | | |
| <p>The proponent indicates that all solid waste will be initially incinerated in their "Stormburn Incineratory Waste Station", which appears to be an incinerator toilet, and then re-burnt in a Garbage incinerator. The reviewer is curious to know how solid waste can be incinerated in a toilet and if the aforementioned is designed for this dual purpose (sewage and garbage). The reviewer would like more information on the sewage incinerator and the garbage incinerator.</p> | | | |
| Do you have any suggestions or recommendation for this application? | | | |
| Please refer to general comments listed below and attached comments regarding the proponent's spill plan. | | | |
| Do you support the project proposal? Yes No Any additional comments? | | | |
| Yes, however, the reviewer would like to see more details regarding the incineration units employed by the proponent. Additional comments are provided in the attached INAC Standard Recommendations. | | | |
| Name of Person Commenting | Robert Eno | of | Iqaluit |

| | | | |
|------------------|---|---------------------|---|
| Position | Water Resources Coordinator | Organization | Indian and Northern Affairs Canada - Water Resources Branch |
| Signature |  | Date | 18/11/2003 |

Indian and Northern Affairs Standard Recommendations:

Legislative Authority

Indian and Northern Affairs Canada (INAC), Water Resources Division, derives its regulatory mandate from the *DIAND Act*, and the *Nunavut Waters and Nunavut Surface Rights Tribunals Act*. The latter Act essentially forbids the deposition of a waste into Nunavut waters, except under certain regulated terms and conditions dictated (as in a Water Licence) by the Nunavut Water Board. A waste is defined as any substance which, when deposited into the water, will alter its quality to the detriment of fish, animals, humans or plants.

In reviewing land use and other permit applications, INAC Water Resources Division observes, in addition to our own legislation, other pertinent Federal Acts and Regulations such as the *Fisheries Act*, the attendant *Metal Mining Effluent Regulations* and the *Canadian Environmental Protection Act* ("CEPA").

In addition to Federal Acts and Regulations, the Government of the Northwest Territories has developed a number of very useful regulations and guidelines under its *Environmental Protection Act* (s) and which was subsequently adopted by the Government of Nunavut in 199. INAC believes that these guidelines are quite helpful in assisting a proponent to remain in compliance with the overall spirit and intent of the various pieces of environmental legislation that govern development activities in Nunavut. These include but are not restricted to: Spill Planning and Reporting Regulations; Environmental Guideline for the General Management of Hazardous Waste; Environmental Guideline for Industrial Projects on Commissioner's Lands; Environmental Guideline for Industrial Waste Discharges and the Environmental Guideline for Site Remediation. INAC advises the proponent to contact the Government of Nunavut, Department of Sustainable Development directly for further details.

Spill Contingency Plan

Refer to attached spill plan review form.

Fuel Storage

To prevent spreading in the event of a spill, fuel stored in drums should be located, whenever practical, in a natural depression a minimum distance of 30 meters from all streams, preferably in an area of low permeability. All fuel storage containers should be situated in a manner that allows easy access and removal of containers in the event of leaks or spills. Large fuel caches in excess of 20 drums, should be inspected daily.

Chemical Storage

All chemicals should be stored in a safe and chemically-compatible manner a minimum of 90 feet from all bodies of water. The applicant should be required to remove unused chemicals for reuse or disposal to an approved site using methods approved by the Land Use Inspector. Material safety data sheets (MSDS) should be provided for each chemical and be posted in a central location; accessible by all camp personnel. Camp personnel should be conversant in the handling of these chemicals as well as able to deal with any accidents or spills.

Location of Hazardous Materials

Hazardous materials stored on-site should be marked so they will be visible under all conditions, in all seasons. This recommendation is intended to help prevent possible injuries to camp personnel and/or

damage to the containers. Unless otherwise specified by the land use inspector or licence -issuing agency, all hazardous materials should be removed from the site upon completion of the activity.

Waste Oil/Waste Fuel Disposal

Waste oil and waste fuel should be removed and returned for recycling when the land use activity is completed. Alternative methods of disposal that provide an equivalent level of environmental protection will be considered on a case-by-case basis. The proponent has indicated that waste oil will be incinerated in their garbage incinerator. Pending a review of the type of incinerator being employed for this purpose, INAC is amenable to this method.

Used Drums

Used fuel and oil drums should be removed from the site, returned for deposit, or reused. The proponent has already indicated that this will be done.

Contaminated Soil

Soil contaminated by fuel (e.g., soils under an old storage tank) should be treated on site or removed to an approved disposal site and replaced with new soil.

Winter Roads

Existing winter road routes and trails should be used whenever possible, to avoid unnecessary land clearing and disruption of site hydrology.

Drill Sumps

The sumps should only be used for inert drilling fluids, not any other materials or substances. The sumps should be properly closed out.

Indian and Northern Affairs Canada Spill Contingency Plan Review Checklist

Additional Information Required (☐)

- ☒ Name, address and title of person in charge
- ☒ Name, job title & 24 hour number of person responsible
- ☒ Location, size & capacity of facility
- ☒ Type and amount of contaminant
- ☒ Site map
- ☐ Steps taken to report, contain, clean up & response
- ☐ How plan is activated
- ☒ Description of training provided to employees/designated responders
- ☐ Inventory & location of equipment
- ☐ Date plan prepared

Additional Comments:

1. The spill plan provided by the proponent, while detailed and covering every contingency from tornados and earthquakes to hostage incidents and bomb threats, it is of a very general nature and does not appear to address the specific operation to which it purports to apply.
2. The proponent should provide 24 hour contact information for the person in charge of this operation and who can activate the spill plan on site. As this is a remote camp, that person should preferably be on site and capable of coordinating a timely and effective spill clean up operation.
3. While the location and size of the facility is provided in the general information package, it is not provided in the body of the spill plan. This information should be included in the spill plan.
4. The reviewer has gleaned from the information package, that the type of

contaminant used on site is primarily, if not solely, fuel. The proponent should provide the quantity and types of fuel (diesel, Jet B, gasoline, Jet A etc.) used on site as well as the type of storage containers used (eg. barrels, bulk fuel storage tanks).

5. The proponent should provide a detailed site map of the area, identifying the location of structures, contaminants storage areas, likely pathways of contaminant flow (in the event of a spill) potentially sensitive areas, such as water bodies, and general topography. The site map should be part of the spill plan.
6. The plan does not indicate what type of spill response training, if any, the camp personnel have undergone. It is strongly recommended that camp personnel be provided with basic spill response training.
7. The reviewer is unable to assess the adequacy of the spill cleanup equipment inventory without knowing the quantities of hazardous materials that are to be stored on site. The reviewer recognizes that this is a relatively small camp (25 - 30 people) and therefore it would be unreasonable to expect them to have on hand, the requisite equipment for every conceivable (and unlikely) occurrence. In the event that the proponent does not have enough material on site to deal with a major spill (they do occasionally happen; even in small camps), they should make prior arrangements to have additional equipment brought in if it becomes necessary to do so. Such a contingency for outside assistance should be described in the plan.
8. While the reviewer appreciates the details provided in the plan, it is suggested that the proponent obtain a copy of the *Guide to the Spill Contingency Planning and Reporting Regulations*. This guide was originally developed by Environmental Protection Service of the Government of the Northwest Territories to complement their *Spill Contingency Planning and Reporting Regulations*; both of which have also been adopted by the Government of Nunavut. The proponent may find these guidelines to be helpful in developing a more realistic spill plan which addresses the specific concerns likely to be expressed by the various regulatory agencies that operate north of 60.
9. The reviewer is willing to address any questions that the proponent may have regarding spill contingency plans.

Review Date: November 18, 2003

Reviewer: Robert Eno

