



Environment Environnement  
Canada Canada

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Our file: 4703 001 030

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**RE: NWB 2BE-FER0712 - Starfield Resources Ltd. – Approval Request to Conduct Land Based Drilling Within 30 Metres of a Water Body - 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 requested approval to conduct land based drilling within 30 metres of the normal high water mark of an unnamed creek near Ferguson Lake, as per Part F, Item 1 of the water licence 2BE-FER0712. The Ferguson Lake Property is known to have nickel, copper, platinum, and palladium deposits. Planned mitigation measures include diapering underneath areas of the drill where leaks or drips could occur, building a dyke/berm around the collar of the drill, using secondary containment for all hydrocarbons and chemicals, using waddles, pumping drill water to a sump located a minimum of 31 metres from the normal high water mark of any water body, and close monitoring throughout the drill program.

Environment Canada generally supports the mitigation measures proposed by Starfield Resources Inc. and would like to add the following comments and recommendations:

- 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. While the use of a 31 metre setback for sumps can be used as a minimum distance, sumps must be sited and managed in such a way that there will be no migration of drilling waste fluids to surface waters.
- Environment Canada would like to remind the proponent that CaCl has been determined to be a toxic substance under the *Canadian Environmental Protection Act*. The proponent shall therefore ensure that if CaCl is used as a drill additive, all sumps containing CaCl are properly constructed and located in such a manner as to ensure that the contents will not enter any water body.
- One of the main reasons for the 30m prohibition is to protect the near shore areas of water bodies. To this end, any work that occurs in that area must be done such that surface erosion does not occur, and there is no disturbance to surficial materials or permafrost.
- EC recommends that the proponent be prepared in the event that sedimentation may occur, and have materials available with which to construct a silt fence or other barrier to prevent solids from reaching the lake.

- If artesian flow is encountered, the drill hole shall be immediately plugged and permanently sealed.
- All spills are to be documented and reported to the NWT 24 hour Spill Line at (867) 920-8130.
- In Appendix II, page 1, of the proponents Fuel Spill Contingency Plan (May 2007) the contacts and numbers for Environment Canada should be changed to the following:

**Environment Canada's 24 Hour Duty Officer**

**Phone: 867-766-3737**

**Fax: 867-873-8185**

EC should be notified of any changes in the proposed or permitted activities associated with this application.

Please do not hesitate to contact me at (867) 669-4735 by email at [anne.wilson@ec.gc.ca](mailto:anne.wilson@ec.gc.ca) with any questions or comments on the foregoing.

Yours truly,

Anne Wilson  
Water Pollution Specialist

cc: Carey Ogilvie (Head, Environmental Assessment - North, EPOD)  
Mike Fournier (Northern Environmental Assessment Coordinator, EPOD)  
Jane Fitzgerald (Environmental Assessment Coordinator, EPO)