



Environment Environnement
Canada Canada

Environmental Protection Operations
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August 14, 2008

Our file: 4703 003 016

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Re: NWB 2BE-CHU0508 – Shear Minerals Inc. – Churchill Diamond 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*.

Comments and recommendations previously submitted by Environment Canada for NWB 2BE- CHU0508, Shear Minerals Inc.'s Churchill Diamond Project, would apply to this renewal.

EC also recommends that the following conditions be applied throughout all phases of the project:

1. The proponent shall ensure that any chemicals, fuel or wastes associated with the proposed land use permit application do not enter waters frequented by fish. It is a requirement of Section 36(3) of the *Fisheries Act* that all effluent discharged into water frequented by fish, be non-deleterious
2. No disturbance of the bed or banks of any definable watercourse is permitted; winter lake/stream crossings shall be located to minimize approach grades and shall be constructed entirely of ice and snow materials; mechanized clearing should not be done immediately adjacent to any watercourse; stream crossing shall be removed or notched prior to spring break-up; suitable erosion control measures shall be implemented at all stream/lake crossing.
3. A copy of the spill contingency plan should be posted where crew members have access to it, and at each fuel cache and refuelling station.
4. EC recommends that all fuel caches be located a sufficient distance from any water body to prevent any fuel from entering a water body and that all caches are inspected daily
5. Fuel or hazardous substance transfers – Secondary containment or surface liner (drip pans, fold a tanks, etc.) should be placed under all containers or vehicle fuel tank inlet and outlet points, hose connections and hose ends during fuel or hazardous substance transfers. Secondary containment should be of adequate size and volume to contain and hold fluids for the purpose of preventing spills (the worst-case scenario).
6. Transfer operations should be attended by trained personnel at all times.
7. Please note that any spill of fuel or hazards materials, adjacent to or into a water body, **regardless of quantity**, shall be reported immediately to the NWT 24-hour Spill Line, **(867) 920-8130**.

8. In the Spill Response Contact List of the proponents Spill Contingency Plan the contact numbers for Environment Canada should be updated to the following:
 - Environment Canada's 24 Hour Duty Officer
 - Phone: 867-766-3737
 - Fax: 867-873-8185
9. Chemical additives or drilling mud used in connection with this drilling program shall be disposed of such that they do not enter any water body either by surface or ground water flows.
10. 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 demonstrated to be non-toxic.
11. For "on-ice" drilling, return water released must be non-toxic, and not result in an increase in total suspended solids in the immediate receiving waters above the Canadian Council of Ministers for the Environment Guidelines for the Protection of Freshwater Aquatic Life (i.e. 10mg/L for lakes with background levels under 100 mg/L, or 10% for those above 100mg/L).
12. Land based drilling should occur a sufficient distance away from the high water mark of any water body, to ensure that no deleterious substances enter any water bodies.
13. If an artesian flow is encountered, the drill hole shall be immediately plugged and permanently sealed.
14. With respect to burning or incineration on site, the proponent should follow and comply with Canada Wide Standards for Dioxins and Furans, and the Canada Wide Standards for Mercury emissions. In order for these guidelines to be met, at a minimum, an incinerator with dual chamber and forced air to allow for sufficient residence time and temperature to maximize combustion should be used.
15. Waste tracking, or "manifesting", should be implemented to ensure proper use, storage, and management of materials. Manifests provide detailed information to first responders in the event of an accident and serve as a tool for confirming that shipments of dangerous or hazardous waste are properly handled, transported, and disposed of.

Environmental Protection Operations (EPO) should be notified of changes in the proposed or permitted activities associated with this application.

Please do not hesitate to contact me at (867) 669-4744 or ron.bujold@ec.gc.ca with any questions or comments.

Yours truly,

Ron Bujold
Environmental Assessment Technician

cc: Carey Ogilvie (Head, Assessment & Monitoring, EPO)
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