



Environment Environnement
Canada Canada

Environmental Protection Operations
Qimugjuk Building 969 P.O. Box 1870
Iqaluit, NU X0A 0H0
Tel: (867) 975-4639
Fax: (867) 975-4645

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Richard Dwyer
Licensing Trainee
Nunavut Water Board
P.O. Box 1360
Gjoa Haven, NU X0B 1J0
Tel: (867) 360-6338
Fax: (867) 360-6369

Via email at licensingtrainee@nwb.nunavut.ca

RE: NWB 2BE-HAK (previously NWB2HAK) – Sabina Silver Corp. – Hackett River Renewal

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*.

Sabina Silver Corp. is proposing to conduct a mineral exploration program to explore for lead, zinc, gold, silver and copper deposits in the West Kitikmeot region of Nunavut. The proposed project includes the establishment of 30 person camp approximately 75 km NNE of the community of Bathurst Inlet. The exploration program will include geological mapping, geophysical surveys and diamond drilling.

Environment Canada recommends that the following terms and conditions be applied throughout all stages of the project:

- 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 in 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.
- Drilling additives or muds 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.
- For "on-ice" drilling where drill additives are not being used, 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).
- The *Canadian Environmental Protection Act* lists CaCl as a toxic substance. 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.
- Land based drilling should not occur within 30 m of the high water mark of any water body.
- Any sumps created for the disposal of camp sewage, grey water, or drill cuttings shall be located above the high water mark of any water body and in such a manner as to prevent



- the contents from entering any water body frequented by fish. Further, all sumps shall be backfilled upon completion of the field season and contoured to match the surrounding landscape.
- If an artesian flow is encountered, the drill hole shall be immediately plugged and permanently sealed.
 - The proponent shall not store materials on the surface ice of lakes or streams, except that which is for immediate use.
 - Environment Canada recommends the use of an approved incinerator for the disposal of combustible camp wastes. The proponent shall ensure that all non-combustible materials, including plastics, as well as any hazardous wastes, including waste oil, receive proper treatment and disposal at an approved facility.
 - All fuel caches shall be located above the high water mark of any water body. Further, given that over 1000 barrels of diesel fuel are proposed for storage, EC strongly recommends the use of secondary containment, such as self-supporting insta-berms, rather than relying on natural depressions.
 - **All spills** shall be documented and reported to the 24 hour Spill Line at (867) 920-8130.
 - The Spill Contingency Plan should provide a clear path of response in the event of a spill. The Hackett River Spill Plan should include a clear chain of command and list of personnel that should be contacted in the event of a spill. The chain of command should identify specific individuals and provide their contact information. The Plan should also provide direction regarding how to respond to spills on various environments, such as snow, ice, muskeg, etc... The Plan should also include a list of key personnel or organizations that should be contacted in the event of a spill. Mr. James Noble, Emergencies and Enforcement Officer for Environment Canada can be included on that list. Mr. Noble can be reached by telephone at 867-975-4644.

The Canadian Wildlife Service (CWS) of Environment Canada has reviewed the above-mentioned submission and makes the following comments and recommendations pursuant to the *Migratory Birds Convention Act* (the *Act*) and *Migratory Birds Regulations* (the *Regulations*), and the *Species at Risk Act* (SARA).

- Section 6 (a) of the Migratory Birds Regulations states that no one shall disturb or destroy the nests or eggs of migratory birds. Therefore, CWS recommends that all activities be conducted outside the migratory bird breeding season, which extends from approximately May 15 to July 31. These dates are approximate, and if active nests (i.e. nests containing eggs or young) are encountered outside of these dates the proponent should avoid the area until nesting is complete (i.e. the young have left the vicinity of the nest).
- If activities are permitted to occur during the breeding season, CWS recommends that the proponent confirm there are no active nests (i.e. nests containing eggs or young) in the vicinity of their operations before activities commence. If active nests of migratory birds are discovered, the proponent should halt all activities until nesting is completed (i.e. the young have left the vicinity of the nest).
- In order to reduce disturbance to nesting birds, CWS recommends that aircraft used in conducting project activities maintain a flight altitude of at least 610 m during horizontal (point to point) flight.
- In order to reduce disturbance to resting, feeding, or moulting birds, CWS recommends that aircraft used in conducting project activities maintain a vertical distance of 1000 m and minimum horizontal distance of 1500 m from any observed concentrations (flocks / groups) of birds.
- CWS recommends that camp waste be made inaccessible to wildlife at all times. Camp waste can attract predators of migratory birds (e.g., foxes and ravens) to an area if not disposed of properly. Incineration of camp waste is a recommended option.

- Section 35 of the *Migratory Birds Regulations* states that no person shall deposit or permit to be deposited, oil, oil wastes or any other substance harmful to migratory birds in any waters or any area frequented by migratory birds.
- All mitigation measures identified by the proponent, and the additional measures suggested herein, should be strictly adhered to in conducting project activities. This will require awareness on the part of the proponents' representatives (including contractors) conducting operations in the field. Environment Canada recommends that all field operations staff be made aware of the proponents' commitments to these mitigation measures and provided with appropriate advice / training on how to implement these measures.
- Implementation of these measures may help to reduce or eliminate some effects of the project on migratory birds, but will not necessarily ensure that the proponent remains in compliance with the *Migratory Birds Convention Act* (the *Act*) and *Migratory Birds Regulations* (the *Regulations*). The proponent must ensure they remain in compliance with the *Act* and *Regulations* during all phases and in all undertakings related to the project.

The following comments are pursuant to the Species at Risk Act (SARA), which came into full effect on June 1, 2004. Section 79 (2) of SARA, states that during an assessment of effects of a project, the adverse effects of the project on listed wildlife species and its critical habitat must be identified, that measures are taken to avoid or lessen those effects, and that the effects need to be monitored. This section applies to all species listed on Schedule 1 of SARA. However, as a matter of best practice, EC asks that species listed on other Schedules of SARA and under consideration for listing also be included in this type of assessment.

Species at Risk that may be encountered	Category of Concern	Schedule of SARA	Government Organization with Expertise on Species
Peregrine Falcon (subspecies tundrius)	Special Concern	Schedule 3	Government of Nunavut
Short-eared Owl	Special Concern	Schedule 3	Government of Nunavut
Grizzly Bear	Special Concern	Pending	Government of Nunavut
Wolverine (Western Population)	Special Concern	Pending	Government of Nunavut

Impacts could be disturbance and attraction to operations.

Environment Canada recommends:

- If Species at Risk are encountered, the primary mitigation measure should be avoidance. The proponent should avoid contact with or disturbance to each species.
- The proponent has consulted with the Government of the Nunavut on specific wildlife species in the area. Environment Canada encourages the proponent to continue to work with the Government of Nunavut and appropriate status reports, recovery strategies, action plans, and management plans to identify other appropriate mitigation measures to minimize effects to these species from the project.
- The proponent should record the locations and frequency of any observations of Species at Risk and note any actions taken to avoid contact or disturbance to the species.



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If there are any changes in the proposed project, 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.spagnuolo@ec.gc.ca.

Yours truly,

Original signed by

Colette Spagnuolo
Environmental Assessment / Contaminated Sites Specialist

cc: (Stephen Harbicht, Head, EA North, Environment Canada, Yellowknife)