



**Environment Environnement
Canada Canada**

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May 19, 2005

Our file: 4705 037 CULL

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Via Email at licensing@nwb.nunavut.ca

RE: NWB1CUL – Barrick Gold Corp. – Cullaton Lake Gold Mine - Request for Remove Requirement for Thermistors

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*.

Barrick Gold Corp. has applied to the Nunavut Water Board to have the requirement for the installation and monitoring of thermistors in the Shear Lake encapsulated waste rock removed from their water license NWB1CUL0207 due to difficulties encountered during their attempt to install the thermistors.

Barrick Gold Corp. contends that it was never their intent to use freeze back as the method for isolating the acid rock drainage generated by the waste rock pile from the environment. Rather, it is stated that encapsulation within the rock cover was chosen to limit oxygen and water access to the waste rock. Barrick Gold Corp. also states that success will be gauged by monitoring the seepage from the rock pile that is collected in the toe berm. Environment Canada agrees that the presence/absence of seepage in the toe berm will gauge the success of the current encapsulation design in isolating the acid generating material from the environment. Therefore, EC recommends that Barrick Gold Corp. report on the amount of seepage collected in the toe berm over next year and if the monitoring results indicate that the rock cover is effectively limiting oxygen and water access to the pile, the requirement for the installation of thermistors in the Shear Lake waste rock pile be removed from the water license. However, if the seepage monitoring indicates that the rock cover is not effective in preventing infiltration of water and oxygen, permafrost encapsulation may be required, and Barrick Gold Corp. should take measures to treat any seepage from the Shear Lake encapsulated waste rock prior to discharge.

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.



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Yours truly,

Original signed by

Colette Spagnuolo
Environmental Assessment / Contaminated Sites Specialist

cc: (Stephen Harbicht, Head, Assessment and Monitoring, Environment Canada, Yellowknife)