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Your file - Votre référence  
1BR-CUL0207

Our file - Notre référence  
#80677 / IQA-N 9545-2-1CULR UNC

May 23, 2006

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Via Email

**Re: 1BR-CUL0207 - Barrick Gold Inc. - Cullaton Lake Project - 2005 Annual Report**

On behalf of Indian and Northern Affairs Canada (INAC) I have reviewed the above-mentioned application. The following specialist advice has been provided pursuant to INAC's mandated responsibilities for the enforcement of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NW&NSRT), *Arctic Waters Pollution Prevention Act* (AWPPA), and the *Department of Indian Affairs and Northern Development Act* (DIAND Act).

Project Information

Barrick Gold Inc. (Barrick) has submitted an Annual Report of water use and waste disposal associated with its closed Cullaton Lake Gold Mine. The project licence requires the monitoring of water in and adjacent to the Tailings Containment Area, the Waste Rock Disposal Area, and the quarry pit area. The Cullaton Lake Gold Mine is situated in the Kivalliq Region, having a coordinate of 61°16'N, 98°30'W. The property is 250 km west of Arviat, 400 km northwest of Churchill, MB and 645 km north of Thompson, MB.

The Annual Report states that a yearly site inspection which involves the collection of water quality and thermistor data from SNP stations and conducting a geotechnical inspection of the tailings dams from Ponds 1 and 2 was carried-out pursuant to the licence requirements. The inspection and minor maintenance work was completed from August 2 to 5, 2005 under the direction of Barrick and Trow personnel.

Maintenance work consisted of:

- Seed (variety of grasses) and fertilizer was added to the Shear Lake encapsulated waste rock (EWR) cover.
- Minor erosion scars noted during the 2004 inspection on the cover flanks were filled with granular road material to provide protection from further erosion.
- The exposed portion of the liner at the no.1 spillway was covered with a layer of granular material.
- Filling-in of minor settlement on the quarry pit cover.

Water quality results from SNP Stations were within the parameter limits specified in the project's licence (Part C: Conditions Applying to Waste Disposal). No samples were taken from SNP Stations 940-24 (Quarry Pit, flow from Tailings Pond No.1) and 940-27 (Seepage from Shear Lake EWR to Shear Lake Creek) due to the lack of water at the time of inspection.

Barrick is committed to establishing a passive treatment system downstream of the Shear Lake Encapsulated Waste Rock (EWR) area should seepage reoccur and the impacts of contaminated seepage and run off become evident (refer to letter addressed to Ms. Gladys Joudrey of the Nunavut Impact Review Board, August 19, 2003). This form of water treatment utilizes limestone and/or dolomite to neutralize acidic water and encourage the precipitation of metals prior to their release into the surrounding environment. A Contingency Plan has been submitted (Part F, Item 6 licence requirement) to address the disposal of limestone and sediments used in the passive treatment system which are contaminated with metals in excess of CCME guidelines.

#### INAC Comments

INAC is satisfied with the information presented in the Cullaton Lake Project's 2005 Annual Report and looks forward to learning of upcoming abandonment and reclamation undertakings.

It is recommended that a technical meeting concerning the management of the tailing disposal areas be considered by the Nunavut Water Board.

Please be advised that INAC-operations intends to conduct a site-inspection of the project area this upcoming summer.

If there are any changes in the proposed project, INAC should be notified, as further review may be necessary. Please do not hesitate to contact me if you have any questions or comments with regards to the foregoing by telephone (867) 975-4555 or by email via [abernethyd@inac-ainc.gc.ca](mailto:abernethyd@inac-ainc.gc.ca).

Sincerely,

David W. Abernethy  
Water Resources Coordinator

cc. Jim Rogers - Manager of Water Resources, Indian and Northern Affairs Canada, Iqaluit