November 25, 2003

Ms. Dionne Filiatrault
Senior Technical Advisor
Nunavut Water Board

Via e-mail

Dear Ms. Filiatrault

Re: Water Licence NWB1CUL0207 – Cullaton Lake Gold Mine

Barrick Gold Inc. holds Water License NWB1CUL0207 for the Cullaton Lake Gold Mine. This license requires Barrick to install and monitor thermistors in the Shear Lake encapsulated waste rock. As described in the attached report, Barrick attempted to install the thermistors in July, 2003 with no success.

This letter and the attached report constitute Barrick's request to have the requirement regarding thermistors deleted from the water license.

If you have any questions on the above, please contact me at 604-895-4410 or vbetts@barrick.com

Yours truly,
Barrick Gold Inc.

Vernon Betts
Western Canada Environment Manager

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Introduction

Barrick Gold Inc. (formerly known as Homestake Canada Inc.) owns the reclaimed Cullaton Lake Gold Mine located in the Nunavut Territory and holds Water Licence NWB1CUL0207 for the property. This licence was issued on October 1, 2002 and replaced Water Licence NWB1CUL9902. The licence expires on September 30, 2007.

The licence requires Barrick Gold Inc. (Barrick) to install thermistors in waste rock encapsulated in the Shear Lake area to confirm that the area is maintained in a frozen state. These thermistors are to be known as Station 940-26 under the Surveillance Network Program.

This report constitutes an application by Barrick to have this requirement removed from Water Licence NWB1CUL0207.

Background

During the annual inspection in 2000, Barrick staff noticed dead vegetation around the toe of the Shear Lake Waste Rock area. Samples of the rock were collected and analyzed in the fall of 2000. It was determined that the rock was generating acid from sulphides contained in the rock.

The initial plan for the mitigation of the waste rock was to place it underwater in Shear Lake. Applications for approval were made to the Nunavut Water Board and the Department of Fisheries and Oceans in 2001. Subsequent follow up included a site visit by DFO staff and the development and submission of a Fisheries Habitat Compensation Plan.

During the 2001 reclamation program, a survey of the waste rock pile was conducted. A trench was dug into the material using a tracked hoe. It was discovered that the waste rock was a thin layer (up to 30 cm. deep) on top of approximately 1 meter of finer material that acted as a base for the stockpile. The estimate of waste rock was reduced to approximately 1000 cubic meters based on this thickness and the stockpile area. The finer material was estimated at 10,000 to 15,000 cubic meters. Due to the reduced volume a decision was made to encapsulate the material on site. Encapsulation was chosen to limit oxygen and water access to the waste rock and thus significantly reduce or eliminate acid generation. It was never Barrick's intent to prevent acid generation by freezing the waste rock. A review of disposal options has been presented to the Nunavut Water Board in *"Assessment of Closure Options and Impacts, Shear Lake Zone Waste Rock Dump – URS – March 2003"*

The area selected for encapsulation was in the general vicinity of the Shear Lake Portal and located down slope from the lake such that any drainage from the material would be away from Shear Lake. Local till previously used for building pads and roads was used to encapsulate the waste rock. First, a compacted till layer approximately 1 meter thick was laid down forming a pad. The waste rock was then placed on this pad and covered with approximately 1 meter of fine till and then 1 meter of coarser till. The area was then seeded with a local grass seed mix. As well, a toe berm was constructed around the encapsulated waste rock to collect any drainage.

Thermistor Installation Attempt

An attempt was made to install thermistors in the Shear Lake encapsulated waste rock on July 29th and 30th, 2003.

The equipment chosen for the installation was a Pionjar drill as this is man portable and could be flown to site on a Cessna Caravan type aircraft along with the operators and necessary accessory equipment.

Two sites were chosen on the encapsulated waste rock: one near the edge and one in the centre of the pile. The sites were prepared by removing the first 0.5 meters of till cover by shovel to reduce the amount of drilling necessary. Drilling then commenced on the first site using a standard rock bit. Once a 1.3 meter depth was achieved, the drill rods were removed from the hole to keep them from becoming stuck and to confirm that they could be removed from a greater depth in the rock pile. This proved to be difficult due to sloughing in the hole and the rock bit becoming stuck.

Once the rods were removed, drilling recommenced and achieved a depth of 2 meters. At this point in time, the installation crew left the site and returned to Thompson, Manitoba for the night.

The crew returned to site on the second day and continued with removing the drill rods. Removing the rods from this depth proved to be extremely difficult, again due to sloughing of the hole. Once the rods were removed, the hole collapsed at a depth of 0.9 meters, still in the cover material. The hole was redrilled to clean it out and allow the installation of the thermistor. However, when the rods were removed, the hole again collapsed approximately 1 meter below grade.

At this point, it was decided to use a 2 inch button bit to drill a larger hole which would allow thermistor installation, even with minor sloughing. This bit was advanced to a 2 meter depth with difficulty. It proved to be impossible to extract the drill rod string with this bit in place. An attempt was made to twist off the bit but this also proved to be unsuccessful. At this point in time, both drill locations were refilled with the surface 0.5 meters of till that had been removed by shovel and the project was abandoned. The replaced till was mixed with cement to ensure compaction.

Based on the efforts of the two days, it was determined that the Pionjar drill was not suitable for installing the thermistors largely due to the inability of a man portable drill to install casing which would prevent sloughing of the drill hole.

Installation Alternatives

A number of alternative methods for thermistor installation were subsequently assessed, as follows:

Portable ODEX Drill

A Portable ODEX rotary/percussion drill could be used to case the holes in the waste rock. The ODEX portable power pack weighs approximately 900 pounds and is accompanied by a compressor weighing approximately 1500 pounds. Use of this drill would require an ATV and trailer and some sort of ramp to load/off load the drill from the plane. It is estimated that this would require a minimum of 3 Cessna Caravan flights to mobilize and 3 more to demobilize. An estimated minimum cost for this is $45,000.

Portable Exploration Diamond Drill

A portable Diamond Drill could be used to drill and case the required thermistor holes. Such a drill weighs approximately 2500 pounds and, as with the ODEX drill, would require an ATV and trailer for site transportation. The number of flights required and therefore costs would be similar to the ODEX drill; that is an estimated minimum cost of $45,000.

Mobile Track/Truck Mounted Drill Rig

Use of a mobile track or truck mounted drill rig would most certainly guarantee success for thermistor installation. However, such a unit would require the use of a Hercules aircraft. It is estimated that this would require 2 flights for mobilization and demobilization. Including positioning costs to move the Hercules to Thompson, Manitoba this is estimated to cost $150,000 for aircraft time alone as well as drill rental and crew time for an estimated cost of $200,000.

Backhoe/Excavator

A small backhoe or excavator could be flow to site and used to excavate the required thermistor holes and then backfill them. This would also require the use of a Hercules aircraft and would have costs similar to that of the Mobile Drill Rig.

Conclusion

Encapsulation was chosen as the most appropriate method for prevention of acid generation from the Shear Lake waste rock. The encapsulation area was chosen to ensure that any drainage from it was directed away from Shear Lake and no seepage was observed from the encapsulation area during the annual site inspections of 2002 and 2003.

Encapsulation was chosen to restrict the access of oxygen and water to the waste rock and thus reduce the rate of sulphide oxidation and metal leaching from the area. While permafrost migration into the pile may be an added benefit, it was never intended as the method of limiting oxidation. As a result, the installation and monitoring of thermistors is not felt to be critical to gauging the success of the encapsulation. In actual practice, success will best be gauged by monitoring the seepage, if any, from the encapsulated waste rock as is currently being done.

Based on the foregoing and the difficulties experienced in attempting to install the thermistors, Barrick requests that the requirement regarding thermistors be deleted from the water licence.