



NIRB File No.:00MN059

July 26, 2007

To: Jericho Tahera Diamond Mine Distribution List

Delivered via email

**Re: Tahera Response to Comments received on the 2006 Wildlife Monitoring Program-Data Summary**

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Dear Parties:

On April 10, 2007, the Nunavut Impact Review Board (NIRB or Board) received Jericho Diamond Mine's 2006 *Wildlife Monitoring Program Data Summary Report* which is a requirement of Appendix D, Part I, number 1 of the Project Certificate.

NIRB received a number of comments from interested Parties about the Jericho 2006 *Wildlife Monitoring Program Data Summary Report*, and directed Jericho to provide a response to the comments (June 5, 2007 and July 2, 2007). On June 26, 2007 and July 16, 2007, NIRB received correspondence from Jericho responding to Party comments. These two documents are attached to this letter and can also be obtained from NIRB's ftp site at:

[http://ftp.nunavut.ca/nirb/NIRB\\_MONITORING/00MN059-JERICO\\_MONITORING/02-MONITORING%20AND%20MANAGEMENT%20PLANS/Wildlife%20Mitigation%20&%20Monitoring%20Plan/02-REPORTS/2006/02-CORRESPONDENCE/](http://ftp.nunavut.ca/nirb/NIRB_MONITORING/00MN059-JERICO_MONITORING/02-MONITORING%20AND%20MANAGEMENT%20PLANS/Wildlife%20Mitigation%20&%20Monitoring%20Plan/02-REPORTS/2006/02-CORRESPONDENCE/)

After review of Jericho's correspondences, NIRB believes that all comments/concerns have been addressed by Jericho. However, NIRB would like to provide interested Parties with an opportunity to review the responses, and if necessary provide input if all comments/concerns have been addressed by Jericho. Please forward your response to NIRB's Manager of Administration, Leslie Payette at [lpayette@nirb.nunavut.ca](mailto:lpayette@nirb.nunavut.ca).

If you have any questions, please do not hesitate to contact me at [sgranchinho@nirb.nunavut.ca](mailto:sgranchinho@nirb.nunavut.ca) or 867-983-4606.

Sincerely,

Sophia Granchinho  
Technical Advisor

Cc: Greg Missal, Tahera Diamond Corporation  
Bruce Ott, Tahera Diamond Corporation  
Cheryl Wray, Jericho Diamond Mine  
Damian Panayi, Golder Associates

**Golder Associates Ltd.**

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June 26, 2007

07-1328-0019

Tahera Diamond Corporation  
Suite 803, 121 Richmond Street West  
Toronto, Ontario  
M5H 2K1

Attention: Greg Missal

RE: Response to NIRB Letter dated June 5, 2007.

Greg,

On June 5, 2007, NIRB submitted a letter containing a list of the recommendations and comments received following a review by NIRB and other interested parties of the report entitled 'Jericho Diamond Project 2006 Wildlife Monitoring Program Data Summary' (the Report), prepared for Tahera by Golder Associates Ltd. In general, it is clear that the Report has received a thorough review, and we welcome the comments as they will help to focus the 2008 wildlife monitoring and reporting on those areas of key concern. We hope that the responses below provide clarification where required, and reiterate commitments to address areas of concern. The responses below have been supplied with the heading and comments numbers used in the original NIRB letter.

**GENERAL**

**Comment 1**

Cumulative summaries of all data collected to date have been presented in the Report where possible (for example, see the sections on caribou, upland birds, and raptors). Several new monitoring tasks were introduced in 2006 (such as wolverine snow-track surveys, grizzly bear sign surveys, and aerial waterfowl surveys) and as they are new surveys, the results can not be compared to conditions prior to construction. Regardless, a greater attempt will be made to incorporate baseline results in the 2007 Wildlife Monitoring Program report.

As requested by NIRB, a discussion of the effectiveness of the mitigation measures will be presented in the 2007 Wildlife Monitoring Program report. A summary of the key impact mitigation strategies used at Jericho is presented in the WMMP, and will be re-iterated in the 2007 Wildlife Monitoring Program report.



#### **Comment 2**

Tahera is currently developing an improved procedure for recording observations of foxes and avian predators, and these results will be presented in the 2007 Wildlife Monitoring Program report.

#### **Comment 3**

Due to staffing shortages in 2006, few wildlife sign surveys were conducted. Tahera is currently working to rectify this, and we expect to present these results in 2007.

#### **Comment 4**

All the information available on the wolverine destroyed on December 7, 2005 was presented in the 2005 Wildlife Monitoring Data Summary for the Jericho Project (page 19). Tahera will develop a wildlife incident report form to ensure detailed summaries of all wildlife incidents are recorded, and will be summarized in the annual Wildlife Monitoring Program report.

#### **Comment 5**

The mine footprint was delineated using satellite imagery. The frequency of image collection is limited by the satellite orbit (images can only be collected when the satellite is passing overhead of the mine), and the need for snow and cloud-free images. As such, there are limited opportunities to collect these images. Further, the WMMP states that the mine footprint will be delineated every two years. As such, the next planned delineation of the Project footprint will be in the summer or fall of 2008. As the Project has entered construction, changes to the project footprint hereafter will be predominantly due to waste rock pile expansion.

#### **Comment 6**

Tahera and Golder will initiate discussions with GN-DOE to discuss the proposed changes to the aerial and ground-based surveys of the Contwoyto Lake and Airstrip roads.

### **CARIBOU MONITORING**

#### **Comment 1**

No rationale was provided as to the location of the caribou observations because the reason is unknown. Further, it would be premature to draw conclusions on project-related effects on caribou distribution from a single year of data. Geographic features such as the Jericho River, the Burnside River, and Contwoyto Lake likely have the greatest single effect on caribou migratory movements during the ice-free season.

## **Comment 2**

No caribou or caribou sign were observed during the winter months and the movements of satellite-collared caribou did not indicate that caribou were present in the study area during the winter (see Appendix I to the Report). The WMMP recommends that caribou aerial surveys and behavioural observations be initiated when there is a threshold of approximately 500 caribou within the study area to maximize efficient use of personnel and helicopter resources. As this threshold was not reached, no caribou monitoring was conducted. As mentioned above, efforts are underway to improve the monitoring of wildlife in the vicinity of the mine through weekly wildlife and wildlife sign monitoring, which will provide supporting information on the presence of caribou during the winter months.

## **Comment 3**

Ground-based behavioural observations are a component of the WMMP (see Section 3.2.2). As stated in the Report, ground-based behavioural monitoring was conducted on three caribou groups in 2006, but a scarcity of caribou in the study area precluded additional ground-based behavioural observations. As the sampling unit for behavioural observations is the group, ground-based methods severely limit the amount of data which can be gathered.

It should be noted also that in both 2005 and 2006 the most commonly observed caribou group behaviours observed during the post-calving migration aerial surveys were feeding and walking, indicating that the behaviour data collected by aircraft is useful.

## **Comment 4**

There were 525 flights to the Jericho camp catalogued in 2006. This does not include helicopter flights, the monitoring of which has been initiated for 2007.

## **Comment 5**

As stated above, Tahera is currently improving wildlife monitoring around the mine site to address questions such as how close caribou came to the mine site. Further to standardized monitoring, all caribou near the mine site will be recorded as incidental observations.

## **Comment 6**

The calf:cow ratio monitoring proposed uses GNWT methods. The monitoring would include making observations from both the ground and from a helicopter; the helicopter being used when caribou densities are low. As it is possible to distinguish cows and bulls by the shape of the antlers, it will not be necessary to fly close enough to view the vulva patch. As with all wildlife studies, field staff always take efforts to minimize disturbance to caribou and other wildlife. Ground-based methods will be used when practical, but this can significantly limit the amount of data collected.

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Calf:cow ratios are of limited use to mine effects monitoring, but are of great value to modelling caribou populations, particularly during population declines. This monitoring was suggested to assist the GN with regional caribou monitoring.

## **GRIZZLY BEARS**

### **Comment 1**

DNA mark-recapture methods for grizzly bear were suggested to Tahera by GN-DOE in a letter addressed to NIRB on December 15, 2006. However, DNA mark-recapture methods have not, to our knowledge, been piloted by either government or industry within the range of the barren-ground grizzly bear to determine the viability of the method. Further, we feel that the methods suggested by the GN-DOE would not yield useful data due to the number of possible combinations of DNA which may result from a grizzly bear family group (which travels together and in effect behaves as a single unit). Unfortunately, DNA does not reveal the age of the individual, making it impossible to identify family units from the hair alone. Incidental observations of grizzly bears within the Jericho study area have not been frequent enough to allow us to provide supporting information from direct observations (see page 23 of the Report). It should be noted that the Kitikmeot Inuit Association (KIA) have expressed concerns with hair-snagging methods for grizzly bears at the Doris North Project, as they believe this could lead to a “trap happy” bear, as a result of a reward baiting system, that spends more time in close proximity to the mine.

By contrast, the method currently in use at Jericho to monitor effects to grizzly bears (where observations of fresh grizzly bear sign are recorded at pre-determined locations) are consistent with the methods used at Ekati, Diavik, Snap Lake and Doris North. Further, the method has proven to be statistically capable of detecting changes to grizzly bear distribution (see Appendix 1 in Diavik 2005, BHPB 2004) and activity (see De Beers 2007). This method was selected for the Jericho WMMP because it has been proven to work, and allows for direct comparison with other mining operations. Should the current method detect changes to grizzly bear activity or distribution within the Jericho study area, additional studies would be considered to learn more of the impact, and to identify mitigation measures.

Tahera would be open to further discussions on this issue, and is willing to lend logistical support to the GN-DOE to pilot DNA mark-recapture methods for grizzly bears.

## **WOLVERINE**

### **Comment 1**

DNA mark-recapture methods to determine wolverine abundance were initiated in April 2007 (in addition to the wolverine snow-track surveys), and are scheduled to be repeated in April 2008.

## **RAPTORS**

### **Comment 1**

As stated above, it is Tahera's intention to conduct a thorough analysis of the wildlife monitoring data every three years, the first such analysis to include data collected from 2006 to 2008. An analysis of nest occupancy as a function of distance from the mine will be attempted at that time, however, to date there is insufficient data for a meaningful analysis.

Comparing 2006 to 2005, lower occupancy rates were observed for both peregrines (seven occupied nests in 2005 down to five occupied nests in 2006) and rough-legged hawks (from 10 occupied nests down to six). During the baseline studies conducted from 1995 to 2000, the number of peregrine nests recorded ranged from two to six, and from three to seven for rough-legged hawks (Hubert 2002). Although three additional nest sites have been identified since the baseline studies, the baseline data indicates that the fluctuations in nest occupancy from 2005 to 2006 are within the natural range of variability expected for these species.

Again, we hope that the responses provided above address the concerns raised by NRIB and other parties. Should further clarification be required, we would be happy to discuss these items by telephone.

Yours very truly,

**GOLDER ASSOCIATES LTD.**



Damian Panayi, B.Sc.  
Wildlife Biologist



Corey De La Mare, M.Sc.  
Associate, Senior Biologist

## **REFERENCES**

BHPB. 2004. Ekati Diamond Mine 2003 Wildlife Effects Monitoring Program. Prepared for BHP Billiton Diamonds Inc. by Golder Associates Ltd. Yellowknife, NT.

De Beers. 2007. Snap Lake Project Wildlife Effects Monitoring Program 2006 Data Report. Prepared for De Beers Canada Mining Inc. by Golder Associates Ltd. Yellowknife, NT.

Diavik. 2005. Environmental Assessment Review and Revised Effects Assessment. Diavik Diamond Mines Inc. Yellowknife, NT.

Hubert. 2002. 1999 and Y2000 Wildlife Field Studies Data Report, Jericho Diamond Project. Prepared for Tahera Diamond Corporation by Hubert and Associates Ltd.

**Golder Associates Ltd.**

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July 13, 2007

05-1328-017

Environmental Protection Operations  
Qimugjuk Building 969  
P.O. Box 1870  
Iqaluit, NU  
X0A 0H0

Attention: Cindy Parker

RE: Environment Canada's comments regarding the Jericho Diamond Project 2006 Wildlife Monitoring Program Data Summary

Cindy

We have reviewed your letter addressed to NIRB dated June 8, 2007, and prepared to make a number of commitments with regards to the 2007 wildlife monitoring program on behalf of the Tahera Diamond Corporation. As per the request from NIRB in a letter dated 2 July, 2007, we have responded directly to Environment Canada. Our commitments are as follows, and the three sections below correspond to the sections of your letter.

1. As there were no young-of-the-year waterfowl recorded during the 2006 survey, we did not present the results in the context of a productivity survey. We will review Environment Canada's suggestions regarding the presentation of the data prior to the preparation of the 2007 Wildlife Monitoring Program Data Summary. Further, we will endeavor to conduct the waterfowl surveys in late July and mid-August of 2007, as per your suggestions.
2. The visibility correction factors presented in Hines et al. (2006), developed for the arctic coast, will be used in the 2007 Wildlife Monitoring Program Data Summary. This will result in a change to the visibility correction factors for Canada geese (from 1.0 to 2.4), and for the long-tailed duck (from 6.5 to 2.7). Thank you for bringing this information to our attention.
3. The data gathered using the PRISM regional shorebird monitoring will be summarized in the 2007 Wildlife Monitoring Program Data Summary, but not analyzed. The raw data will be submitted to Environment Canada shortly, and we understand that EC will analyze the data at their convenience.





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We thank Environment Canada for their review of the 2006 Wildlife Monitoring Program Data Summary, and for their constructive comments. If you have any further questions, please do not hesitate to contact Cheryl Wray or Bruce Ott of Tahera.

Yours very truly,

**GOLDER ASSOCIATES LTD.**



Damian Panayi, B.Sc.  
Wildlife Biologist



Corey De La Mare, M.Sc.  
Wildlife Biologist, Associate

cc. Cheryl Wray, Tahera Diamond Corporation  
Bruce Ott, Tahera Diamond Corporation  
Greg Missal, Tahera Diamond Corporation  
Leslie Payette, Nunavut Impact Review Board  
Sophia Granchinho, Nunavut Impact Review Board

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