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Our file: 4702 025

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Via Email at exec@nwb.nunavut.ca

Dear Mr. diPizzo

RE: Tahera Diamond Corporation, Jericho Diamond Project – Revised Interim Closure and Reclamation Plan

Thank-you for the opportunity to provide input to the Nunavut Water Board (NWB) regarding the revised Interim Closure and Reclamation Plan (herein referred to as the C&R Plan) developed by Tahera Diamond Corp. for the Jericho Diamond Project. The C&R Plan is required under Part M, Item 2 and Part M, Item 7 of the water license NWB1JER0410. This submission is being provided as requested by the NWB in their letters dated March 27, 2005 and March 22, 2006, indicating that a written hearing will be held on this plan.

1.0 Introduction

The mandate of Environment Canada (EC) is defined by the *Department of the Environment Act*. This *Act* provides the Department with a general responsibility for environmental management and protection in terms of the need to foster harmony between society and the environment for the economic, social, and cultural benefit of present and future generations of Canadians. The Department shares this responsibility with the provinces and territories. Environment Canada is also responsible for providing specialist or expert information and knowledge for the preservation and enhancement of environmental quality.

The operation of the Jericho Diamond Mine is subject to the following statutes administered by Environment Canada: Section 36(3) of the *Fisheries Act*, the *Canadian Environmental Protection Act* (CEPA 1999), the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

Environment Canada's review of the C&R Plan is based primarily on its mandated responsibility for the administration and enforcement Section 36(3) of the *Fisheries Act*. The *Compliance and Enforcement Policy for the Habitat Protection and Pollution Prevention Provisions of the Fisheries Act* states that compliance with the federal *Fisheries Act* is mandatory. Subsection 36(3) of the *Fisheries Act* specifies that unless authorized by federal regulation, no person shall deposit or permit the deposit 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. Proponents should note that only a federal regulation under the *Fisheries Act* or another Act of Parliament can authorize a discharge of a deleterious substance; no federal permit, provincial, territorial or



municipal regulatory permit or approval allows for exemption from these provisions of the *Fisheries Act*.

2.0 Specific Comments

Environment Canada is pleased to provide the following comments for the Nunavut Water Board (NWB) for consideration in the review of this document. Please note that EC's review of this document does not include the updated reclamation and closure cost estimate, as this falls outside of EC's mandate. The comments are organized by section number and page number for ease of comparison.

Section 2.5 – “Top Dressing Placement Strategy”, Page 10

- Tahera Diamond Corp. shall ensure that any amendments that are used on site are in conformance with the New Substance Notification Regulations under the *Canadian Environmental Protection Act (1999)*.

Section 5.1 – “Reclamation Activities during Construction”, Page 18

- More information regarding closure plans for the land farm are required. For instance, Section 5.1 states that soils that do not meet CCME industrial site guidelines will be remediated at the land farm. However, no information is given regarding the remediation objectives that will be used at the land farm to indicate that soils have been remediated. No information is provided regarding how remediated soils within the land farm will be used, or how soils that do not reach remediation guidelines will be disposed of (please see comments submitted to the NWB on the land farm facility dated March 16, 2006).

Section 5.2.3 – “Surface Infrastructure”, Page 19

- Information is given regarding the temporary closure of surface infrastructure, including sewage treatment facilities. Tahera should note that rotating biological contactor (RBC) units are prone to upset, and care should be taken when using the unit during a temporary shutdown scenario to ensure that treatment criteria are being met.

Section 5.5.2.3 – “Post-Closure Water Management”, page 26

- The C&R Plan states that “current estimates of long term water quality using the conservative assumptions discussed in the SRK Technical Memorandum Q (SRK 2004a, Appendix B) indicate that the pit lake may not meet CCME guidelines for freshwater aquatic life” post closure. The C&R Plan goes on to state that regulators will be consulted if ongoing monitoring indicates that pit water quality will not meet CCME guidelines to determine an appropriate course of action. Environment Canada agrees with this proposition, and will review this information when submitted by Tahera Diamond Corp.

Section 5.5.3.2 – “Long-term Stability”, page 29

- Final reclamation and closure plans for the PKCA include treating the water remaining in the western end of the PKCA if water quality discharge criteria are not met. If required and when available, information should be submitted regarding the details of any such treatment plans.

Section 5.5.10 – “Infrastructure”, Page 31

- This section of the plan lacks considerable detail. Information required includes, but is not limited to, the potential volumes of infrastructure that will require disposal at closure, how infrastructure will be decontaminated prior to disposal, disposal of hazardous materials, disposal of liners from sedimentation ponds (if present), and where non-salvageable items will be buried. No information is presented regarding how or when the various dams and dykes on site will be breached at closure.



- It is recommended that infrastructure to be disposed on on-site be reduced in size prior to disposal (crushed, cut up into small pieces, etc.) in order to minimize void spaces in the disposal area.

Section 6.5.1 – Post Closure Monitoring, Page 35

- It is recommended that the quality of water in the open pit, once full, be monitored. Tahera Diamond Corp. will have to monitor the water quality in the pit to determine if in-situ treatment is required, if discharge via a constructed channel to the northeast of Stream C1 is appropriate, or if the pit will be allowed to spill into the original C1 channel, as per Section 5.5.2.3 of the C&R Plan.
- EC agrees that the results of the aquatic effects monitoring program should be used to determine if additional aquatic monitoring may be required after closure. EC recommends that the post closure monitoring program be updated and submitted for review when the final Closure and Reclamation Plan is submitted as per the water license. It is recommended that the water quality results obtained during the life of the project be used to guide the location, frequency and parameters of the post closure monitoring program.
- The list of post-closure water quality monitoring sites included on page 35 does not match with Figure 6.1. Figure 6.1 includes the Stream C3 outlet, which is not included in the list. EC recommends that this location also be monitored.

GENERAL

- Environment Canada's final hearing submission to the NWB recommended that the revised version of the C&R Plan should include a discussion of research needs to inform reclamation planning. Specifically, EC recommended that an evaluation be completed on the coarse kimberlite for weathering and behaviour in order to determine if it is a suitable cover material, and identify appropriate cover depths. This information does not seem to be included in the Plan, and should be required under Schedule M, Part I, Item I.
- Clarification is required regarding the monitoring that would be put in place under each closure scenario. The current C&R Plan only provides information regarding post closure monitoring (Section 6.5.1) and post abandonment monitoring (Section 6.5.2). Information should also be presented regarding any monitoring that is different from license requirements that would be completed under temporary shutdown, indefinite shutdown and final reclamation. If no additional monitoring is planned during temporary, indefinite and final reclamation stages, this should be clearly documented in the plan.

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 Colette Spagnuolo 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

Cheryl Baraniecki,
Manager, Environmental Assessment

cc: (Stephen Harbicht, Head, EA North, Environment Canada, Yellowknife)
(Anne Wilson, Water Pollution Specialist, Environment Canada, Yellowknife)
(Colette Spagnuolo, EA / Contaminated Sites Specialist, Environment Canada, Iqaluit)