

Environment
CanadaEnvironnement
Canada

Northern Division
Environmental Protection Branch
Suite 301, 5204 - 50th Ave
Yellowknife, NT X1A 1E2
Ph. (867) 669-4700

January 9, 2004

Chair
Nunavut Impact Review Board
P.O. Box 2379
Cambridge Bay, NT X0B 0C0

File # 4702 025

By facsimile c/o 867-360-6369

Dear Ms. Copland:

Re: Nunavut Impact Review Board Hearings for the Tahera Corporation Jericho Diamond Mine Project - Environment Canada's Closing Comments

Environment Canada (EC) would like to thank the Nunavut Impact Review Board (NIRB) for the opportunity to present our concerns with the proposed Tahera Corporation Jericho Diamond Mine Project. We would like to acknowledge the help of Board staff in distributing our presentation, and to comment that the hearings were well run.

In the course of the hearing in Cambridge Bay there was constructive exchange of information and discussion among the stakeholders and proponent which resulted in movement towards resolving some of Environment Canada's outstanding concerns with the project. In other cases there was agreement between the proponent on what is needed to resolve remaining concerns. Environment Canada would like to provide the NIRB with a summary of our issues in the form of closing comments in the hopes that these may be helpful in developing terms and conditions for the project. These are attached and summarize the issues presented in EC's intervention.

If the NIRB would like clarification on any of the points in this intervention, please contact Anne Wilson at (867) 669-4735.

Yours sincerely,

for
Laura Johnston
Manager, Northern Division
Environmental Protection Branch
Environment Canada

Excluded Paper / Papier Exclue



- Further pre-impact data for water, aquatic biota (zooplankton, phytoplankton, and benthic invertebrates), and sediments will be collected by Tahera Corp. prior to disturbance, starting in 2004. As the water licence may not be finalized prior to planning for the 2004 field season this should be included as a recommendation in the EA decision.

Hydrology:

- As a result of information provided by Tahera Corp. in the course of the hearing it appears that conservative assumptions and designs have been used that would offset uncertainties in the use of climate and hydrology data. Residual hydrology concerns have been deferred for discussions between EC's hydrologist and Tahera Corp.'s consultant.
- Concerns with capacity of the PKCA have been addressed through proposed mitigation measures which include spillway design, release management options, and overdesign of site-wide storage capacity. These issues are substantially resolved, or can be addressed in the regulatory process, and do not affect reaching a screening decision.

Air quality:

- EC acknowledges that previous modeling relied on screening data (rather than site-specific meteorological data) and that it was useful in that it has flagged potential exceedences.
- Further modeling with on-site met data is needed to develop the air quality monitoring program.
- Tahera Corp. has committed to conducting air quality monitoring and will be discussing methodology such as siting of monitors with Environment Canada air quality experts.
- In the absence of specific regulatory instruments that would implement reporting, EC seeks annual air quality monitoring reports.

Monitoring of air quality should be a requirement of the project certificate or an Environmental Agreement

Hazardous materials:

Disposal of hazardous materials to a landfarm:

- Tahera Corp. needs to demonstrate that remediation and/or disposal of contaminated materials can be effectively achieved.

This issue can be addressed in the permitting stage.

Best practices issues:

Process water recycling:

- Tahera has not ruled out the use of water recycling to minimise volumes of fresh water used and amounts discharged.

Greenhouse gas emissions reduction:

- Tahera Corp. will be installing a combined heat and power system in the processing plant.

Use of low-sulphur fuels:

- EC recommends that Tahera Corp. use low-sulphur diesel fuels.

Ammonium nitrate storage:

- ANFO storage design should be such that environmental risks are minimized.

These are best practices issues and do not affect reaching a screening decision.

Cumulative effects:

- EC recommends that Tahera participate in regional initiatives on cumulative effects assessment and monitoring.

Environment Canada's Closing Comments for the Tahera Project NIRB Public Hearings Jan. 5-9, 2004

Migratory birds:

- Environment Canada and Tahera did not come to agreement on the adequacy of migratory bird baseline data, nor on the mitigation planned.
- Tahera has agreed to include monitoring of migratory birds in the Wildlife Management Plan, and EC is available to help in development of this component.
- Tahera suggested that winter construction timing may mitigate loss of nests and eggs, however, EC recommends that the company implement an environmental management plan which includes steps to prevent losses of nests and eggs during summer activities within the development area.
- EC is satisfied with Tahera's commitment to ensure birds will not have access to the landfarm, nor to any spilled hydrocarbon products.

Monitoring of migratory birds should be a requirement of the project certificate or an Environmental Agreement.

Aquatic issues:

Effluent treatment and quality:

- Other treatment options need to be detailed further. References are made to the use of a flocculation plant, and EC seeks a commitment from Tahera Corp. to be prepared to implement this or other treatment alternatives if needed. Spray irrigation is an option for removal of total dissolved solids (TDS) and ammonia, and other treatment methods may be required for metals removal and/or pH adjustment. With respect to spray irrigation treatment EC recommends careful site selection, field testing, and effective monitoring of field trials to verify erosion prevention and spray behaviour prior to proceeding to full scale use of this treatment.
- Effluent ammonia and phosphorus levels, forms and behaviour need to be further identified. Tahera Corp. has agreed to provide estimates of nutrient loadings, and modeling updates which show isopleths of predicted concentrations of ammonia, phosphorus, TDS and metals in downstream waters.
- Predictions of TDS constituents will be identified by Tahera Corp. EC also requests that Tahera Corp. provide some estimate of aquatic ecosystem effects of modeled TDS levels.
- EC anticipates that there will be appropriate limits in the water licence for ammonia, phosphorus and metals, along with requirements for monitoring.
- EC does not recommend regulating TDS on a whole-lake basis in this case. Rather, EC suggests the approach of rigorous monitoring to detect any early effects in Lake C3. Effects such as changes in water quality would trigger treatment or other mitigation contingency plans.

Information requested in the first three bullets should be provided at Tahera Corp.'s earliest opportunity to allow stakeholders to participate effectively in the regulatory process. This information was requested during the environmental assessment process, and would have improved EC's confidence in the likelihood of adequate impact mitigation in the area of water quality protection. EC requests that provision of the requested details prior to the commencement of the regulatory phase be a condition of the NIRB screening.

Aquatic baseline data and monitoring:

- Tahera has modified the proposed aquatic monitoring programs substantially to the satisfaction of EC. Further details of the monitoring program can be developed in consultation with the stakeholders and EC is available to provide comments directly to Tahera Corp. on proposed programs.