



April 25, 2012

Dr Indarjit Ramdass

Executive Director
Environmental Protection Agency.
Ganges Street, Sophia, Georgetown.

Dear Dr Ramdass,

Decision on the Final Environmental and Social Impact Assessment Report on the Toroparu Gold and Copper Mine (ETK Inc.) Project.

The Environmental Assessment Board (EAB) has reviewed the final Environmental and Social Impact Assessment (ESIA) Report for the Toroparu Gold and Copper Mine as proposed by ETK Incorporated Project, and presented by Ground Structures Engineering Consultants Inc. The Board finds that the final Report has generally satisfied the requirements of the ESIA Terms of Reference for the proposed Toroparu Mine, and that the considerations and conditions for appropriate management of such a development activity have been addressed.

Based on these findings, the Board hereby issues its **acceptance of the final ESIA report, and recommends an environmental authorization be granted** by the Environmental Protection Agency (EPA) to the Proponent (ETK Inc.) for the implementation of this project.

In addition, the Board recommends particular clauses to be included in the said environmental permit. It is anticipated that these inclusions would assist the EPA's compliance monitoring to ensure project implementation along best practice principles.

The decision and recommendations of the EAB are detailed and appended hereto.

The Proponent should be encouraged to develop an Environmental Management System for their mining operations through which their Environmental Management Plan (EMP) will be implemented.

Yours sincerely,

Vanessa Benn
EAB Chairman

c: EAB members

Environmental Assessment Board Decision and Recommendations

Final Environmental and Social Impact Assessment Report on the Toroparu Gold and Copper Mine Project as proposed by ETK Inc.

The Environmental Assessment Board (EAB) has reviewed the final Environmental and Social Impact Assessment (ESIA) Report dated January 2012, which was tabled to the Board on March 7th, 2012. The report, submitted by the consultants Ground Structures Engineering Consultants Limited on behalf of the Developer (ETK Incorporated), was considered against the approved Terms of Reference and recommendations based on the review of the draft ESIA report.

The Project as proposed by ETK Inc. seeks to pursue gold and copper resources in the Upper Puruni River area, through the development of several Prospecting Licenses, Mining Permits in areas on both banks of the Puruni River in the vicinity of Toroparu. In addition to the mining activities, ancillary works are proposed which in particular would see the construction of an access road to the mine site; and the construction and operation of a wharf on the Cuyuni River. An off-site processing facility is also being considered.

The Developer has expressed his commitment (in the ESIA Report), to adhere to GGMC Mining License and EPA guidelines.

General Comments and Recommendations of the Environmental Assessment Board on the Final ESIA Report

1. The EAB finds that Final Report on the environmental and social impact assessment conducted by the consultants, the methodologies applied and the findings presented have satisfied the requirements of the terms of reference for the proposed gold and copper mine. The conditions for appropriate management of such a development activity have also been outlined in the report.
2. Illustrations (maps and figures) and tables were presented to supplement the information provided in the report.
3. The EAB recommends that the Developer and the EPA ensure (and guarantee where possible and appropriate) the standards for construction, implementation and closure phases of this project are managed and monitored along best practice principles including those detailed in the Final ESIA report.

Specific Comments and Recommendations

1. Introduction (page 14)
 - 1.1 The Board noted the Developer's intention to "apply to the GGMC for issuance of a Mining License in accordance of the terms of the PLs" with respect to their access and rights "to

several Prospecting Licenses (PLs) in addition to several Mining Permits” and “to several medium scale Prospecting Permits (PPMs)”.

1.2 The EAB hereby **recommends the EPA ensures appropriate licensing permits** have been considered and issued (if approved) by the GGMC to the Developer. The environmental authorization to the Developer by the EPA shall also be subject to these licensing requirements.

1.3 The **EPA shall determine any possible liability issues** which may arise in the event of an environmental or other incident at the mine site or to areas of influence from the mine during the implementation of the project.

1.4 The **EPA must verify and keep an updated record of the parties responsible** in the event of an environmental disaster since the impact of any negative effect may spread over and beyond the area of project influence.

2. Description of Proposed Operations (pag3 20)

2.1 The EAB noted that many key aspects of this project are yet to be finalized. A few examples are:

- Dyke design – details to be finalized following geotechnical engineering investigations (page 22)
- Establishment of an off-site treatment facility – to be established following metallurgical testing and prefeasibility and feasibility studies (pages 20, 29 & 33)
- Establishment of a stand-alone saprolite processing facility or a combined saprolite sulfide process – depends on the metallurgical testing (page 29)
- Possible treatment with a cyanide leaching process for gold recovery – to be determined following metallurgical testing (page 30)
- Provision of water for drinking/cooking to be obtained from wells or open water supplies (page 33)
- Location of the port facility – subject to discussions between ETK and Guyana Lands and Surveys Commission (page 34)

In addition, Section 5 (Existing Environment) of the Report refers to the finalization of the mine site layout (page 77)

2.1.1 The EAB recommends that the EPA **include permit conditions that the Developer should submit the final project description as an addendum** (including the details outlined in 2.1 above), upon completion of the testing and/or studies described in the Final ESIA Report.

- The proposed upgrade of the access road to the mine site of this project must **conform to the Guyana Forestry Commission's Road Planning Guide** as outlined in the Code of Practice for Timber Harvesting (2002).
- The Developer must seek **approval from the Guyana Civil Aviation Authority** prior to construction of the permanent airstrip.
- Prior to establishing a groundwater well to supply the camp, the Developer must obtain the requisite **permission/approval from the Hydrometeorological Service**. Any treatment methods of the groundwater or open water supply should be communicated to the EPA prior to construction.
- The Developer must ensure that the terms of employment of employees and contractors shall include the **prohibition of hunting and fishing and trading in endangered species**.

3 Environmental Management Plan

The Developer shall implement the Environmental Management Plan, including the institutional requirements for the Plan, as detailed in the Final Environmental and Social Impact Assessment – Toroparu gold and Copper Mine document, dated January 2012. In particular, the Developer shall:

- Consult with the Guyana Forestry Commission prior to commencement of tree clearing operations within the project boundaries to ensure that timber within the project footprint can be made available to timber concessionaires in the area.
- Identify the limits of the areas to be cleared and monitor these.
- Provide the tailings and water management ponds with impervious liners.
- Submit the results of the assessment of the Acid Rock Drainage and Metal Leaching potential of the ore body to the EPA and the Guyana Geology and Mines Commission (GGMC).
- Submit the initial and final designs of the tailings ponds to the EPA and the GGMC for approval of these structures prior to project start up and the use of these facilities.
- Compost all food waste and organic matter and use the composted material as a fertilizer.
- Construction and use of septic tanks must comply with the specifications of the Guyana National Bureau of Standards
- Develop and implement a training programme for indigenous persons.
- Seek partnerships with other groups to ensure that the road connecting Itaballi to the mine site is maintained to a standard adequate for passage of vehicles
- Ensure proper prophylactic measures are implemented to protect workers and other persons from malaria and other harmful diseases at the project sites.
- Consider the utilization of green energy sources, such as solar panels at monitoring and communications equipment locations.

4 Monitoring Plan

The **Developer shall implement the Monitoring Plan** detailed in the ETK INC.: Final Environmental and Social Impact Assessment – Toroparu Gold and Copper Mine (dated January 2012), and shall establish monitoring programmes for the following:

- Weather parameters
- Hydrological parameters, particularly in waterways affected by the use of water
- Extent of clearing
- Quality of water provided for drinking/cooking purposes
- Noise levels, including during blasting
- Fuel, Chemicals and Explosives (if not included as part of its Hazardous Materials Monitoring)
- Inspection of physical conditions of dyke and seepage from the dyke
- Inspection of physical condition of the water management pond

4. Closure Plan

The Developer shall **submit a final detailed Closure Plan approval by EPA** prior to the Closure Phase of the project, based on the conceptual version provided in the Report.

Submitted on behalf of the Environmental Assessment Board.



Vanessa Benn
Chairman
Environmental Assessment Board

March 25, 2012