



Aboriginal Affairs and
Northern Development Canada

Affaires autochtones et
Développement du Nord Canada

Box 1500
YELLOWKNIFE NT X1A 2R3

July 19, 2012

MVEIRB File Number: EIR0607-001
Mr. Chuck Hubert
Panel Manager
Mackenzie Valley Environmental Impact Review Board
P.O. Box 938
Yellowknife, NT X1A 2N7

BY EMAIL: c.hubert@reviewboard.ca

**Re: Gahcho Kue Diamond Mine Environmental Impact Review for DeBeers
Canada Inc. – Second Round Information Requests**

Dear Mr. Hubert:

Aboriginal Affairs and Northern Development Canada (AANDC) is providing the following second round information requests (IRs) for the Gahcho Kue Environmental Impact Review Panel. AANDC believes this information is necessary in assessing the potential impacts of the Gahcho Kue Diamond Project (EIR0607-001) and thanks the panel for providing the opportunity to submit these requests.

AANDC staff are available to discuss these IRs and their associated rationale with the Gahcho Kue Environmental Review Panel, staff and the proponent.

If you have any questions, please contact Lionel Marcinkoski at 669-2591 or via email at Lionel.Marcinkoski@aandc-aadnc.gc.ca.

Sincerely,

Robert Jenkins
Manager
Water Resources Division

IR Number: AANDC IR2-1

Source: Section 8: KLOI Water Quality and Fish in Kennady Lake; Section 9: KLOI Downstream Water Effects

To: DeBeers Canada Inc.

Subject: Site-specific Water Quality Objectives for Kennady Lake and the Downstream Receiving Environment

Preamble:

Site-Specific Water Quality Objectives (SSWQOs) are established to ensure that a project does not impact the aquatic environment beyond an accepted level of change. Other terms used to describe SSWQOs in Northern projects include “EA Thresholds” and “Water Quality Benchmarks.”

Site-specific water quality objectives are not regulatory limits (i.e. effluent quality criteria). Rather, they represent the level that must be maintained in the receiving environment, to ensure with confidence that the intended level of protection is met. AANDC encourages proponents to consider existing background concentrations and concentrations predicted as a result of their project as well as CCME guidelines when proposing SSWQOs for a development. Objectives that fall between natural background and existing generic guidelines provide greater confidence that any impacts to the receiving environment will be within an acceptable range.

AANDC views that SSWQOs would apply at a clearly defined assessment boundary in the receiving environment, which could include use of a mixing zone.

The Gahcho Kue project is unique as it utilizes an existing waterbody (Kennady Lake) as a Water Management Pond and it requires that the waterbody be reopened at the end of operations. Consequently, the conditions within the Water Management Pond during operation are key to having the pond reopened at the end of mine, and water quality and sediment quality “Thresholds” should be identified within Kennady Lake.

Note, for consistency AANDC uses the term “SSWQOs” to refer to conditions in the downstream receiving environment and has used of the term “Threshold” to identify conditions applying within Kennady Lake. Thresholds may be different than SSWQOs and neither the Threshold values nor the SSWQOs would be considered Effluent Quality Criteria (EQC).

DeBeers Canada Incorporated (DCI) concludes that the predicted effects are not significant and/or are mitigable. However, the following effects were identified in the DAR: a change in trophic status within Kennady Lake, temporary or long term increases in metal and ion parameters in Kennady Lake and the downstream receiving environment, changes in species distributions within Kennady Lake and the downstream receiving environment.

Request:

1. Please propose water and sediment quality “Thresholds” for Kennady Lake during operations and post-closure.
2. Please identify an assessment boundary for SSWQOs in the downstream receiving environment during operations and post-closure.
3. Please identify SSWQOs for the downstream environment.
4. To support acceptability, relate the proposed post-closure Kennady Lake and downstream SSWQOs to existing background concentrations, generic guidelines or appropriately established toxicity benchmarks.

IR Number: AANDC IR2-2

Source: Section 8: KLOI Water Quality and Fish in Kennady Lake; Section 9: KLOI Downstream Water Effects

To: DeBeers Canada Inc.

Subject: Acceptable Levels of Change for Kennady Lake and the Downstream Receiving Environment

Preamble:

Sections 8 and 9 of the EIR predict a range of effects from the project. DCI concludes that the predicted effects are not significant and/or are mitigable.

Defining the level of change in the receiving environment that would be considered acceptable/unacceptable is valuable when assessing potential impacts from a project, given that there is always a level of uncertainty inherent in EA predictions and effects assessments.

Furthermore, having defined statements regarding acceptable/unacceptable levels of change from a project provides clear direction in the development of:

1. A rigorous and scientifically defensible Aquatic Effects Monitoring Plan
2. A systematic Adaptive Management Plan, including Effects Levels that 'trigger' Adaptive Management (i.e. Management Response), and associated management response actions

These plans rely on outcomes of the EA even though they are ultimately required of the project in the regulatory phase. As such, the EA and regulatory phase of the process are directly linked. Consequently, an incomplete EA can lead to complications in the regulatory process during initial water licence issuance, as well as during operations and closure (i.e. unanticipated changes to the project, mining conditions or effluent quality).

Request:

1. Please define acceptable levels of change/effect from the operation on Kennady Lake and the downstream receiving environment, or identify how DCI proposes to define such levels within the context of this EA. Describe how traditional knowledge and stakeholder input was/will be utilized in these determinations.
2. Please describe effect levels for Kennady Lake and the receiving environment (Early Warning Low, Moderate and High Effect Levels) that would be used to trigger adaptive management to avoid exceedence of site "Thresholds" and "SSWQOs". Note these action levels will be used within the AEMP and Adaptive Management Plan (e.g. water quality, sediment, benthic and aquatic community, fish, etc.).
3. Describe a conceptual framework for adaptive management that would be used to avoid exceedences of Thresholds and SSWQOs.