



Environmental Protection Operations
Prairie and Northern
4999-98th Avenue
Edmonton, Alberta T6B 2X3

July 13th, 2012

EC file: 4780 026
MVEIRB file: EIR0607-001

Veronica Chisholm

Permitting Manager
De Beers Canada Inc.
Suite 300, 5102-50th Ave
Yellowknife, NT X1A 3S8

Attention: Ms. Chisholm

**RE: Environment Canada Information Requests – Round 2
Gahcho Kué Diamond Mine Project, De Beers Canada Inc.**

Environment Canada (EC) has reviewed the Environmental Impact Statement and Supporting Documents including the revised Detailed Alternatives Analysis Report (June 2012) submitted by De Beers Canada Inc. for the above mentioned project.

EC's Round 2 Information Requests (IRs) are based primarily on EC's mandated responsibilities under the *Fisheries Act*, *Canadian Environmental Protection Act*, *Species at Risk Act*, and *Migratory Bird Convention Act*.

Should you require further information, please do not hesitate to contact Ms. Lisa Lowman at 867-669-4721 or via email at lisa.lowman@ec.gc.ca.

Sincerely,

Cheryl Baraniecki, Regional Director
Environmental Protection Operations
Prairie and Northern Region
Environment Canada

cc: Gahcho Kue Panel
Larry Dow (A/Area Director, Fisheries and Oceans Canada)
Gavin More (Manager EA, Environment and Natural Resources, GNWT)
Susanne Forbrich (Manager, EA and Marine Programs Division, EC)
Carey Ogilvie (Head EA-North, EA and Marine Programs Division, EC)
Chris Doiron (Manager, Mining and Processing, EC)
Lisa Lowman (Senior EA Coordinator, EA and Marine Programs Division, EC)
Anne Wilson (Sector Support, EA and Marine Programs Division, EC)

Environment Canada

Round 2 Information Requests

Environmental Impact Statement
and Supporting Documents
Gahcho Kue Diamond Mine Project

Submitted to:
De Beers Canada Inc.
July 13th, 2012

MVEIRB File No: EIR0607-001

Wildlife Information Request:

IR Number: EC IR#1

Source: Environment Canada

To: De Beers Canada Inc.

Subject: **Disturbance/destruction of nests from flooding of terrestrial habitat**

References: Response to DeBeers response to Round 1 IR #EC-3; Gahcho Kue Fish Habitat Compensation Plan – Update (June 29th, 2012)

Terms of Reference Section: 5.2.4 - Species at Risk and Birds

Preamble

In response to Environment Canada's (EC) Round 1 IR #EC-3, De Beers Canada Inc. identified that the construction of perimeter Dyke F will cause the water level in Lakes D2 and D3 to rise by 2.8 m over a three year period. Construction of Dyke G will cause Lake E1 to rise by 0.8 m over a 1 year period. This will result in 53.31 ha of flooded terrestrial habitat around Lakes D2/D3 and 6.83 ha of flooded habitat around Lake E1. The largest changes in water level are anticipated to occur during the month of June in each year due to the spring freshet. This corresponds to the period when migratory birds may be establishing nests in the areas that will be flooded.

The updated fish habitat compensation plan (dated June 29th, 2012), suggests that De Beers may increase the area flooded to create new fish habitat. This would involve raising the water level of some lakes west of Kennady Lake to a level greater than required only for the Project. Lakes D2, D3, E1 and N14 will be raised by 3.8 m, 2.6 m, 2.8 m, and 2.7 m respectively. This will result in roughly 150 ha of flooded terrestrial habitat, more than twice what was originally estimated in the response to Round 1 IR #EC-3. Water levels would be raised even further following mine closure, increasing the flooded area to 184.4 ha. Additional flooded areas would also be created in the A watershed.

Activities that physically disturb or destroy terrestrial habitat during the breeding season can result in the inadvertent disturbance or destruction of nests and eggs of migratory birds. This "incidental take" of migratory bird nests and eggs is prohibited under section 6(a) of the federal *Migratory Birds Regulations*. Under the legislation, EC cannot issue a permit to authorize the disturbance or destruction of a nest in circumstances of incidental take. As a result, the Proponent is responsible for taking appropriate measures to ensure that they comply with the legislation.

De Beers Canada Inc. is aware of the Regulations and has met with EC on two occasions (i.e. May 8th and July 4th, 2012) to discuss potential approaches to mitigation.

Request

EC requests that De Beers Canada Inc.:

- 1) Confirm the total amount of terrestrial habitat that will be flooded during operations and post-closure if the fish habitat compensation plan is implemented; and
- 2) Provide a description of potential mitigation measures that are being considered to prevent destruction of nests and eggs of migratory birds in the areas that will be flooded following construction of the Kennady Lake perimeter dykes. This description should include details of the advantages and limitations of each potential mitigation measure, the rationale for selecting the best available option, and any field work that has been carried out or is being planned to confirm how many birds may be nesting in the affected area.

Water Management Information Requests:

IR Number: EC IR#2

Source: Environment Canada

To: De Beers Canada Inc.

Subject: **Area 7 Dewatering**

References: *“Detailed Alternatives Analysis Report”, June 2012*

Preamble

EC has reviewed the report and participated in discussions with De Beers and DFO regarding the proposed configuration for water management within the basin of Kennady Lake. Option B3 of Alternative B was selected, as addressing concerns with the use of Area 1 as well as retaining economic feasibility. This option includes full dewatering of Area 7 in order to construct Dyke K in the dry. Dewatering would subsequently provide additional water management capacity in Area 7.

Request

EC requests that De Beers Canada Inc. provide an explicit rationale for dewatering Area 7 that includes consideration of the benefits of preserving that basin of the lake as a viable ecosystem.

IR Number: EC IR#3

Source: Environment Canada

To: De Beers Canada Inc.

Subject: **Water & Sediment Quality Objectives and EQCs**

References: Technical Memo dated June 27th 2012, *“Water Quality Objectives (WQO) and Sediment Quality Objectives (SQO) for the Proposed Gahcho Kue Project – Initial Development Process”*

Preamble

During the May technical sessions the question of environmental quality objectives was raised for water and sediment, along with the identification of achievable effluent quality criteria. De Beers Canada Inc.’s consultants issued the technical memo on June 27th, 2012 outlining the approach and a table of contaminants of potential concern. A selection process has been applied which narrowed down the list of substances that would require development of Chronic Effects Benchmarks (CEBs) for Kennady Lake, Lake N11, and Lake 410. These include parameters which are predicted to be above CCME guidelines for the protection of freshwater aquatic life for baseline levels.

Request

EC requests that De Beers Canada Inc.:

1. Include water and sediment (as applicable) quality objectives for the full suite of parameters listed in Table 1 of the Technical Memo;
2. Where CCME guidelines are deemed inappropriate, or do not exist, identify the procedure used to derive the CEBs, including the toxicity modifying factors that are considered;
3. Identify where CCME Guidelines are proposed as objectives, and compare to baseline concentrations;
4. Where background concentrations are substantially below CCME guidelines, identify the concentration which may be more appropriately maintained as an objective;

5. Identify where in the receiving environment the objectives will be met for each water body; and
6. Identify the extent of the water or substrate which will be above CEBs, or potentially be subject to chronic effects.