



March 30, 2012

File: S110-01-08

Chuck Hubert
Environmental Assessment Officer
Mackenzie Valley Environmental Impact Review Board
P.O. Box 938
Yellowknife NT X1A 2N7

Dear Mr. Hubert:

Transport Canada - Information Request Responses
Gahcho Kué Project Environmental Impact Review

De Beers is pleased to provide the Mackenzie Valley Environmental Impact Review Board with responses to Information Requests submitted by Transport Canada.

Sincerely,

Veronica Chisholm
Permitting Manager

Attachment

c: S. Garrick, Environmental Officer, Transport Canada



GAHCHO KUÉ PROJECT ENVIRONMENTAL IMPACT STATEMENT
INFORMATION REQUEST RESPONSES

Information Request Number: TC - 01
Source: Transport Canada
Subject: Winter Access Road
EIS Section: Section 1.3.9, Section 3.10.2.7

Preamble

De Beers is proposing to use construct a 120 km winter access road from Kennady Lake to the north end of MacKay Lake and will intersect the Tibbitt-to-Contwoyto Winter Road at kilometer 271 .

Request

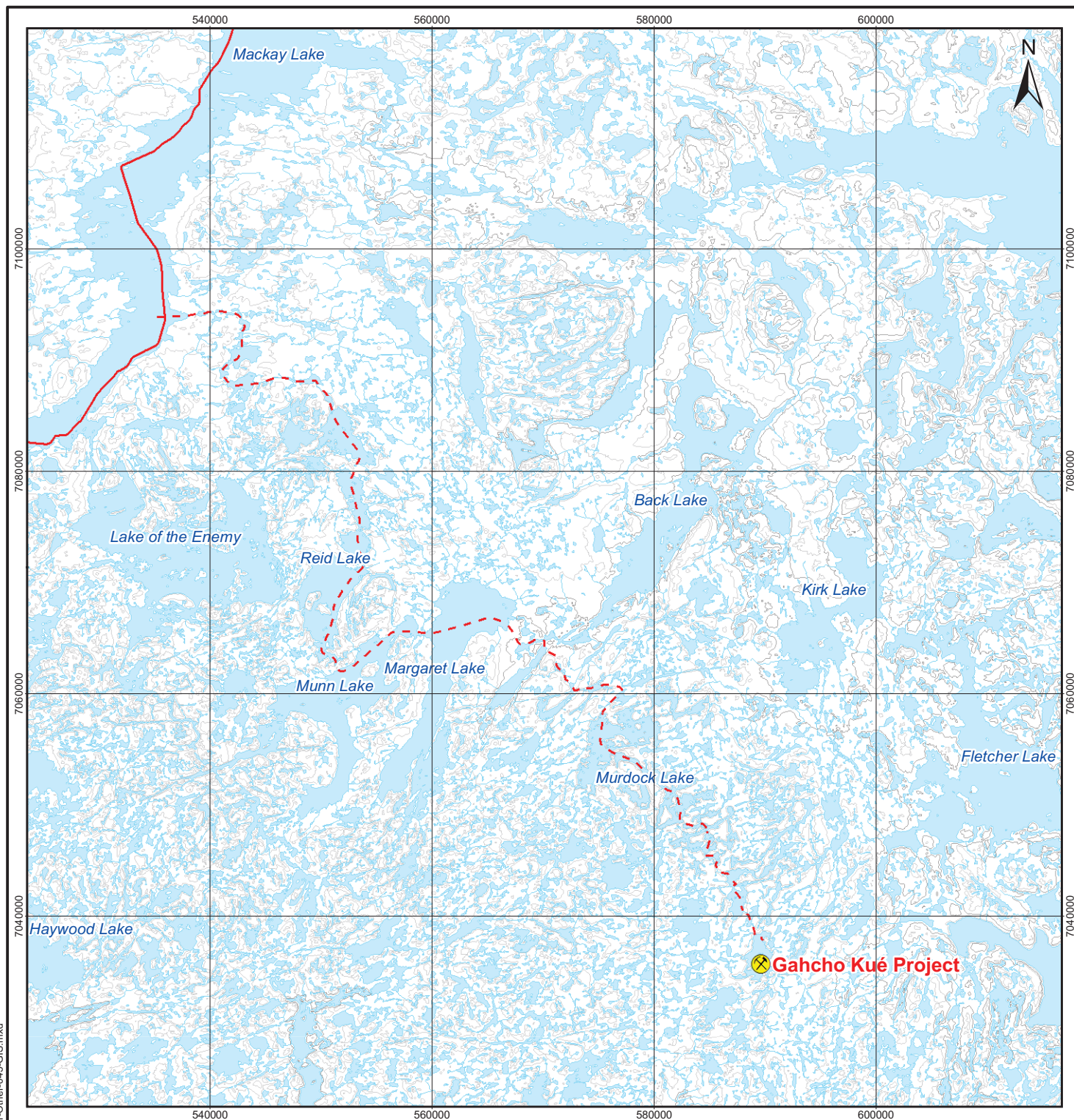
Please provide the following details;

- i) Figure 3.10.2 titled “Winter Access Road to Project Site” in the EIS unclear, please provide a map at a higher resolution
- ii) Provide the details with regards to the construction, timing, and operation of the winter access roads.
- iii) If winter crossings are to be constructed across navigable waters that are frozen please provide the location of the crossings, and all materials that will be involved in the construction of the crossing(s).
- iv) If all materials will be removed before the end of the winter season.

Response

- i) The Gahcho Kué Project winter access road (winter access road) routing has been used several times in previous years to support exploration activities. The same routing is planned for the construction and operational phases of the mine. A higher resolution map of Figure 3.10-2 Winter Access Road to Project Site from the 2010 EIS Project Description (De Beers 2010, Section 3) is included with this response as Figure TC - 01-1.

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LEGEND

- Gahcho Kué Project
- Tibbitt-to-Contwoyto Winter Road
- Winter Access Road
- Watercourse
- Waterbody
- Index Contour (100m interval)
- Intermediate Contour (20m interval)

NOTES

Source: Figure 3.10-2 in De Beers 2010
Base data source: National Topographic Base Data (NTDB) 1:250,000

GAHCHO KUÉ PROJECT

Winter Access Road to Project Site

PROJECTION: UTM Zone 12
DATUM: NAD83

Scale: 1:500,000
10 5 0 10
Kilometres



FILE No: P2011-Other-045-GIS
DATE: March 9, 2012

JOB NO: 11-1365-0001
REVISION NO: 1

OFFICE: GOLD-CAL
DRAWN: CW
CHECK: PT

Figure TC-01-1

GAHCHO KUÉ PROJECT ENVIRONMENTAL IMPACT STATEMENT
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- ii) The construction of the winter access road will be done each year, during the construction, operations and interim closure phases of the mine development. A northern contractor experienced in winter road construction will be selected to build and maintain the road for a multi-year period. Typically construction will take place in January of each year with an aim to have the winter access road to be completed by the time the Tibbitt-to-Contwoyto Winter Road (TCWR) is opened to Yellowknife. It is expected the winter road contractor will leave certain equipment at the end of each season to allow for January construction to take place. Construction will include ice thickness verification inspections to ensure the winter access road has sufficient load capacity.

The typical operational period of the winter access road will be for 9 to 10 weeks generally covering the months of February and March of each year. Variations in winter temperature can cause this period to shorten/lengthen. Planned usage is approximately 1,500 truckloads per year which would equate to less than one truck per hour on average. Trucks will be dispatched from Yellowknife in accordance with the TCWR Joint Venture guidelines, rules and regulations (e.g., safety, speeds, weights, grouping requirements) applying to that section of the road will also be enforced on the winter access road (TCWR JV 2012, Appendix B).

- iii) The winter access road as shown on the map will cross numerous lakes that are navigable during open water seasons. Road construction over lakes is done by ice thickening by clearing snow and flooding on top of the ice to promote faster and thicker ice growth.

Ice bridges involving mats may be considered for use at certain times and locations to provide strengthening of weak ice areas or crossing ice ridges however the use and location of use of mats can't be determined in advance.

Portages crossing land areas between the lakes will be constructed by using snow and ice. Improvements to the underlying portage areas may

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be considered on a year-by-year basis however these would not impact navigable watercourses.

- iv) All materials used will be removed each season from the navigable water surfaces. Equipment and materials would be returned to Yellowknife or stored at the mine site or designated winter road storage areas as appropriate.

References

De Beers (De Beers Canada Inc.). 2010. Environmental Impact Statement for the Gahcho Kué Project. Volumes 1, 2, 3a, 3b, 4, 5, 6a, 6b, 7 and Annexes A through N. Submitted to Mackenzie Valley Environmental Impact Review Board. December 2010.

TCWR JV (Tibbitt-to Contwoyto Winter Road Joint Venture). 2012. Tibbitt to Contwoyto Winter Road Emergency Response/Spill Contingency Plan. Revision #8 – January 2012. Available at:
<http://www.mvlwb.ca/mv/Registry/2009/MV2009X0047/MV2009X0047-%202012%20TCWR%20Emergency%20Reponse%20Plan-%20Oct17-11.pdf> – Accessed March 2012.

GAHCHO KUÉ PROJECT ENVIRONMENTAL IMPACT STATEMENT
INFORMATION REQUEST RESPONSES

Information Request Number: TC - 02

Source: Transport Canada

Subject: Site Access Roads

EIS Section: Section 3.10.2.8

Preamble

Site access roads will be required for the transport in and around the project site. The development of the site roads may require watercourse crossings and the use of culverts.

Request

Please provide the following information;

- i) A map identifying the crossing locations with the latitude/longitude coordinates.
- ii) Depth and width of the watercourse and number of culverts (if applicable) associated with those crossings.
- iii) Also please provide the erosion control measures that may be placed at these locations.

Response

- i) The only identified crossing location is on the mine access road that connects with the seasonal winter access road on the northern end of the property (refer to attached Lake A3 Fact Sheet). A watercourse crossing is designed at the Lake A3 outlet BM UTM 12 coordinates E 590742 N 7038359 (De Beers 2010, Addendum HH). The exact location and sizing of the culverts will be determined during the detailed design of the road). All mine roads will be constructed using fill only techniques and are located within the controlled area of the project development, thus drainage naturally moves to the Kennady Lake basin. Installation of small diameter culverts will be used to facilitate spring runoff water to pass through the roadbed and avoid ponding on the uphill side of the road as needed will also be sized and located during detail design.

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- ii) Lake A3 outlet stream is 0.5 m wide and 0.2 m deep measured in June 2010 (De Beers 2010, Addendum HH). Please see Lake A3 Factsheet attached. All other planned culvert locations are not considered watercourses but rather drainage patterns for spring melt runoff.
- iii) Most of the water runoff passing through the mine road network naturally drains to the water management pond. Use of silt fences at or near the culverts will be considered to capture sediments in areas where the water may flow outside the controlled area.

References

De Beers (De Beers Canada Inc.). 2010. Environmental Impact Statement for the Gahcho Kué Project. Volumes 1, 2, 3a, 3b, 4, 5, 6a, 6b, 7 and Annexes A through N. Submitted to Mackenzie Valley Environmental Impact Review Board. December 2010.

LAKE A3 AND OUTFLOW HYDROMETRIC STATION

LAKE A3

FACTSHEET

LOCATION AND DETAILS

Located on the left downstream bank of Lake A3 outlet, approximately 3 kilometres northeast of Kennady Lake Exploration Camp.

Operational in 2011 from 25 May to 15 September

Benchmark: Bolt on boulder; 424.04 m (geodetic)

Coordinates: UTM: 590846 m E, 7038405 m N (NAD83, Zn12)

Lat/Long: 63°27'45" N, 109°10'39" W

Transducer: Keller Acculevel Submersible
Level Transducer

Datalogger: Optimum Instruments DD-520



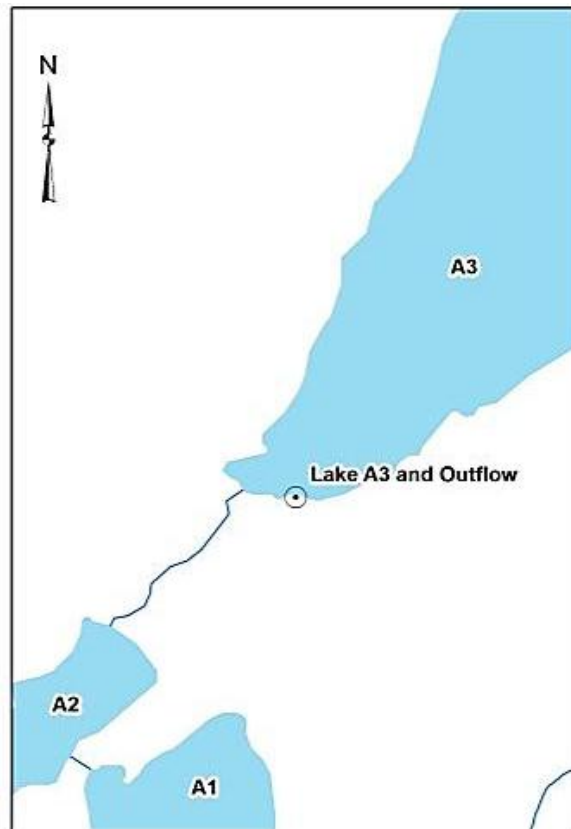
Aerial view of Lake A3, view northeast



Lake A3 Outlet Channel, view downstream



Lake A3 Shoreline during installation, 25 May
2011



NTS Mapping of Area

GAHCHO KUÉ PROJECT ENVIRONMENTAL IMPACT STATEMENT
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Information Request Number: TC - 03

Source: Transport Canada

Subject: Transportation – Impacts to Navigation

EIS Section: Section 8, Section 9

Preamble

De Beers is proposing to use Kennady Lake as water management area, which will require dewatering, the construction of dykes, and infilling a portion of Kennady Lake. The diversion of watersheds will also be required in and around the project area. The EIS describes the management of water in the project area; however, the impacts to navigation are not specifically identified.

Request

Please provide the following information on any waterbodies or watercourses that may be impacted by the water management processes and mine operation as it relates to navigation

- i) Higher resolution maps of the works proposed in the water management area (Section 8 and Section 9), as the ones located in the EIS are not clear
- ii) Width and depth of the waterbodies and watercourses
- iii) Conceptual drawings, including location of the dykes, water intake
- iv) More detailed drawings of the diversions, area of infill
- v) Conceptual plan of decommissioning the project; stages of dyke removal and the re-filling of Kennady Lake.

Response

Navigable waterways affected by the mine development would consist of the Areas 2 to 7 of Kennady Lake, as well as the outlet between Areas 7 and 8. The lake area is affected by virtue of the lake being fully or partially dewatered to access and develop the ore bodies. The outlet of Kennady Lake at Area 7 will be dyked off during the construction, operations, and closure phases of the Project, thus temporarily affecting its seasonal navigability until the mine is reclaimed.

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The installation of facilities in Area 8 of Kennady Lake for potable water sourcing and Lake N11 for outlet and diffusion of compliant discharge will also have some temporary effects. Other inlets to Kennady Lake that are dyked off to control water ingress into the controlled area are not considered navigable. Water levels in Lakes D2, D3, E1, and A3 will rise as a result of dykes installed at their outlets.

- i) Higher resolution figure of the works proposed in the water management area is included in this response as Figure TC – 03-1 and is also included in the 2012 EIS Supplement (De Beers 2012, Section 3, Figure 3.9-1).
- ii) Please see Figure TC – 03-2 for Lake Bathymetry. Annex H and Addendum HH of the 2010 EIS (De Beers 2010) contains hydrology and physical descriptions of pertinent waterbodies and watercourses, baseline updates are provided in the 2011 Climate and Hydrology Supplemental Monitoring report (Golder 2012).
- iii) Information on Dyke location is included in Figure TC - 03-1 which illustrates an overview of dyke locations.
- iv) The diversions and dyke locations are shown in Figure TC – 03-2.
- v) Key activities for the conceptual plan of decommissioning the Project and stages of the dyke removal are detailed in the following table (Table TC - 03-1). Also, Appendix 8.I, Attachment 8.II of the 2010 EIS (DeBeers 2010) provides more detail on the closure plan as it relates to water management.

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Table TC – 03-1 Key Activities and Milestones in the Conceptual Closure and Reclamation Schedule

Activity/Milestone	Year
Begin progressive reclamation of Fine PKC Facility	3
Begin reclamation cover completed areas with coarse PK	3
Backfill open area behind dyke L with waste rock and /or coarse PK	6
Complete coarse PK cover layer and grade surface	7
Complete mine rock cover and achieve interim closure for his area	8
Begin progressive reclamation of South Mine Rock Pile	5
Finish final grading	6
Begin progressive reclamation of West Mine Rock Pile	7
Finish final grading	8
Begin progressive reclamation of 5034 Pit	5
Initiate backfill with fine PK and mine rock	5
Achieve interim closure - Begin final flooding	11
Begin progressive reclamation of Hearne Pit	7
Initiate backfill with fine PK	7
Achieve interim closure - Begin final flooding	11
Begin progressive reclamation of Coarse PK Pile	6
Complete mine rock cover and achieve interim closure for this area	9
Finish mining in the Tuzo pit	11
Complete backfill with demolition material	11
Breach Dyke B, begin re-flooding of pits	11
Breach Dykes K and N	11
Decommission explosives storage and manufacturing facilities	11
Complete construction of fish enhancements structures	11
Start to decommission processing plant and service shop	12
Complete decommissioning of processing plant and maintenance complex	12
Decommission main power plant	12
Remove main fuel storage tanks	12
Remove permanent accommodation complex	13
Achieve interim closure status	13
Reclaim site roads not required for reclamation monitoring	13
Breach Dyke A	19+
Complete the refilling of Kennady Lake	19+
Final demobilization from site	19+
Monitor post-closure conditions in Kennady Lake	20+

Note: table has been adapted from Section 3, Table 3.12-1 of the 2010 EIS (De Beers 2010).

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De Beers. 2012. Environmental Impact Statement Supplemental Information Submission for the Gahcho Kué Project. Submitted to the Mackenzie Valley Environmental Impact Review Board. April 2012.

Golder (Golder Associates Ltd.). 2012. 2011 Climate and Hydrology Supplemental Monitoring Report for the Gahcho Kué Project. Submitted to De Beers Canada Inc. March 2012.

GAHCHO KUÉ PROJECT ENVIRONMENTAL IMPACT STATEMENT
INFORMATION REQUEST RESPONSES

Information Request Number: TC - 04

Source: Transport Canada

Subject: Transportation - Airstrip

EIS Section: Section 3.10.2.10

Preamble

The proposed permanent airstrip will be constructed to handle aircraft for the construction operation and decommissioning of the project site.

Request

- i) Please identify if the airstrip will be private, registered or a certified aerodrome.
- ii) A drawing identifying the location of the navigational safety lighting and emergency services.

Response

- i) The airstrip will be private.
- ii) The preliminary design of the airstrip is based on industry standards (drawing attached). Final design of the navigational safety lighting and emergency services will be undertaken during the detail design phase of the Gahcho Kué Project. The preliminary design includes:
 - standard and RNav POS approach;
 - runway lighting;
 - non-directional beacon;
 - lighted wind socks;
 - AWOS and VHF radio facilities;
 - automated weather station including equipment to detect cloud ceiling height; and
 - emergency response equipment including fire truck with foam.

