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Staff Report

Applicant: De Beers Canada Inc. – Gahcho Kue Project	
Location: Kennady Lake, NT	Application: MV2005C0032 and MV2005L2-0015
Date Prepared: May 28, 2018	Meeting Date: June 7, 2018
Subject: Preliminary Screening Determination – March 19, 2018 Amendment Applications	

1. Purpose/Report Summary

The purpose of this Report is to present to the Mackenzie Valley Land and Water Board (MVLWB/the Board) an amended preliminary screening conducted to include the March 19, 2018 Amendment Applications to Land Use Permit (Permit) MV2005C0032 and Water Licence (Licence) MV2005L2-0015, as submitted by De Beers Canada Inc. (De Beers) for the Gahcho Kue Project (Project).

2. Background

- August 11, 2014 – Board approves and issues Permit MV2005C0032 to De Beers and submits recommendation for approval of Licence MV2005L2-0015 to the Minister of Environment and Natural Resources;
- September 23, 2014 – Minister of Environment and Natural Resources approves Licence MV2005L2-0015;
- September 24, 2014 – Board issues Licence MV2005L2-0015 to De Beers;
- March 19, 2018 – De Beers submits Amendment Applications for Licence MV2005L2-0015 and Permit MV2005C0032;
- March 29, 2018 – Amendment Applications deemed complete;
- April 3, 2018 – Review commenced;
- April 12, 2018 – Board invokes paragraph 22(2)(b) of the Mackenzie Valley Land Use Regulations (MVLUR);
- May 7, 2018 – Reviewer comments and recommendations due and received;
- May 10, 2018 – Work Plan approved by the Board;
- May 21, 2018 – Responses due and received; and
- **June 7, 2018 – Amended Preliminary Screening presented to the Board for decision.**

3. Discussion

Submission Description

The March 19, 2018 Amendment Applications (attached) address a geotechnical issue identified in the open pits, namely, the presence and orientation of joint sets. This necessitates a proposed change to pit design, including the extraction of up to an additional 100 Mt of mine rock over the life of the mine. Several other changes to the Project are also proposed that have not been previously approved including:

- Expansion of the West Mine Rock Pile;
- Expansion of the open pits;
- Construction of the A2 North Perimeter Berm;
- Additional footprint for pits and mine rock piles; and
- Additional jet fuel storage.

The March 19, 2018 Amendment Applications also included an Updated Project Description (UPD) to the Board, which included a table outlining the major differences between the 2005, 2010, 2012, 2013 and 2018 project descriptions for the Gahcho Kué Project.

Environmental Impact Review

On July 19, 2013, the Mackenzie Valley Environmental Impact Review Board (Review Board) released its Report of Environmental Impact Review (Report of EIR 0607-001) outlining the final scope of development.

Preliminary Screening

The Board conducted the most recent Preliminary Screening of the Project on June 7, 2017 (attached). Table 1 below outlines the Final Scope of Development in EIR 0607-001, the 2013 UPD and updated information provided during the MVLWB regulatory process, and the March 19, 2018 Amendment Applications. Board staff have highlighted in green the components that have changed as a result of the March 19, 2018 Amendment Applications; these require preliminary screening.

Table 1: Comparison of the Final Scope of Development released in EIR 0607-001, the Project Description (and updated information provided during the MVLWB Regulatory Process) as submitted by De Beers in 2013, and the March 19, 2018 Amendment Application

Project Description			
Characteristic	EIR 0607-0001 Final Scope of Development	2013 Updated Project Description and Information Submitted during MVLWB Regulatory Process	March 19, 2018 Amendment Applications
Surface Disturbance (Mine Footprint)	N/A	Total = 1,172 ha	Total = 1,292ha (a total increase of 85.23ha, broken down as follows): <ul style="list-style-type: none"> • Dyke L haul road – 5ha • Road to temporary laydown – 1ha • Temporary laydowns – 19.25ha

			<ul style="list-style-type: none"> • Airstrip re-alignment and increased width – 17.5ha • ROM pad area – 12ha • East pad extension – 4.48ha • Expanded pits, west mine rock pile, and road – 26ha
Pit depths	<p>The mining of the Tuzo and 5034 pits to approximately 300m deep and Hearne pit to approximately 205m.</p> <p>The development does not include the Telsa pipe, kimberlite deposits in the Tuzo, 5034, and Hearne at depths deeper than those identified in the project description or other potential kimberlite deposits in the area.</p> <p>Page 34 of the EIR</p>	<ul style="list-style-type: none"> • Hearne Pit = 252 m • 5034 Pit = 310 m • Tuzo Pit = 360 m 	<ul style="list-style-type: none"> • Hearne Pit = 216 m (up to 252 m) • 5034 Pit = 286 m (up to 310 m) • Tuzo Pit = 372 m (up to 373 m)
Total Amount of Mine Rock	N/A	300 Mt	Approximately 400 Mt
Placement of Mine Rock	<p>Storage of mine rock in south mine rock pile, the west mine rock pile (max height 94m) and the 5034 pit.</p> <p>Page 35 of the EIR</p>	<ul style="list-style-type: none"> • West Rock Pile = ~100Mt • South Rock Pile = ~100Mt • Mined-out 5034 Pit = ~85Mt • Mined-out Hearne pit = ~15Mt 	<ul style="list-style-type: none"> • West Mine Rock Pile = ~228 Mt • South Mine Rock Pile = ~100 Mt • Mined-out 5034 Pit = ~72 Mt • Mined-out Hearne pit = contingency storage area
Height of Mine Rock Piles	<p>Storage of mine rock in south mine rock pile, the west mine rock pile (max height 94m) and the 5034 pit.</p> <p>Page 35 of the EIR</p>	<ul style="list-style-type: none"> • West Mine Rock Pile = ~100 m • South Mine Rock Pile = ~120 m 	<ul style="list-style-type: none"> • West Mine Rock Pile = ~135 m • South Mine Rock Pile = ~120 m
Placement of Fine Processed Kimberlite (PK)	Fine PK stored in fine PK facility (mitigated) as well as in the 5034 and Hearne pits	<ul style="list-style-type: none"> • Fine PK Containment facility Area 2 • Mined-out Hearne Pit 	<ul style="list-style-type: none"> • Expanded Fine PK Containment facility Area 2 • Mined-out Hearne Pit
Placement of Coarse PK	Storage of a portion of the coarse PK on land north of the plant site in the on-land coarse PK pile with the remainder placed in the west mine rock pile and used for reclamation of the fine PK Containment facility	<ul style="list-style-type: none"> • Coarse PK Pile • Dyke construction and reclamation • Mine Rock Piles • Mined-out 5034 and Hearne Pits 	No change

Water Diversions	<ul style="list-style-type: none"> • Construction of various dykes and berms to remove water from controlled area • Water pipeline to Lake N11 in the N watershed • Water pipeline from Lake A1 to Lake J1b in the J watershed allowing water to flow to Area 8 of the Kennady Lake watershed 	<ul style="list-style-type: none"> • Diversion of clean water from Lake N11 or other sources (e.g., WMP, if quality is adequate) to augment Area 8 flow (i.e., downstream flow mitigation) 	<ul style="list-style-type: none"> • Construction of the A2 North Perimeter Berm • Diversion of clean water from Lake N11 or other sources (e.g., WMP or Area 7 if quality is adequate) to manage inflow volumes and augment Area 8 flow (i.e., downstream flow mitigation)
Water Management	Removal of water from Kennady Lake for use at the mine site, both by mining personnel and for mining operations, including dust control	Annual quantity of fresh water withdrawn to not exceed 27,000 m ³ /year during the operational phase	Increase in camp water consumption to 45,000 m ³ /year
Aviation Fuel	N/A	20,000 L	303,000L to 500,000 L Increase of 197,000 L
Equipment	N/A	N/A	Haul Trucks (4) Haul Trucks (2) Shovel (1) Excavator (1) Dozer (2)

Board staff have updated the draft Preliminary Screening (attached) to reflect changes proposed in the March 19, 2018 Amendment Applications, for the Board's consideration.

4. Comments

Not applicable.

5. Reviewer Comments

By May 7, 2018, comments and recommendations were received on the March 19, 2018 Amendment Applications from 7 reviewers:

- Environment and Climate Change Canada;
- Fisheries and Oceans Canada;
- Government of Northwest Territories (GNWT) – Environment and Natural Resources (ENR);
- GNWT – Lands;
- Ni Hadi Xa;
- North Slave Metis Alliance; and
- Board staff.

Board staff indicated in the instructions for the public review that the Board must conduct a preliminary screening on the March 19, 2018 Amendment Applications, unless they are exempt from Part 5 of the MVRMA, and requested reviewers submit comments and recommendations (e.g. on impacts and mitigation measures) to the Board to assist with the completion of a preliminary screening. No comments or recommendations specific to the exemption from screening were submitted, indicating that this March 19, 2018 Amendment Applications could be exempted from Part 5 of the MVRMA.

Preliminary Screening

The draft Preliminary Screening (attached) contains information from the March 19, 2018 Amendment Applications and review comments regarding environmental and socio-economic concerns, along with mitigations, and is for the Board's consideration.

6. Security

De Beers did not submit an updated RECLAIM estimate with the March 19, 2018 Amendment Applications. They are currently in the process of preparing a revised security estimate for the Project as per the Board's March 16, 2017 letter of direction (attached); this is due June 30, 2018 and is anticipated to include an estimate for the mine plan as currently approved, as well as an estimate to account for the proposed mine plan described in the March 19, 2018 Amendment Applications.

7. Conclusion

Board staff conclude there are no outstanding issues or concerns with this submission.

8. Recommendation


Board staff recommend the Board **make a motion to approve the amended preliminary screening** for Land Use Permit MV2005C0032 and Water Licence MV2005L2-0015.

A draft decision letter is attached.

9. Attachments

- [March 19, 2018 Amendment Applications](#)
 - [Updated Project Description](#)
 - [Environmental Screening Assessment conducted by De Beers](#)
- [Mackenzie Valley Environmental Impact Review Board – Report of Environmental Impact Review](#)
- [June 7, 2017 - Preliminary Screening Report](#)
- Draft Preliminary Screening
- [March 16, 2017 – Board direction to review security](#)
- Draft Decision Letter from the Board

Respectfully submitted,



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Regulatory Specialist