



**Mackenzie Valley Land and Water Board**  
7th Floor - 4922 48th Street  
P.O. Box 2130  
YELLOWKNIFE NT X1A 2P6  
Phone (867) 669-0506  
FAX (867) 873-6610

April 20, 2017

File: MV2005L2-0015

Ms. Sarah McLean  
De Beers Canada Inc.  
Gahcho Kué Project  
Suite 300, 5120-49<sup>th</sup> St.  
YELLOWKNIFE NT X1A 1P8

Email: [Sarah.McLean@debeersgroup.com](mailto:Sarah.McLean@debeersgroup.com)

Dear Ms. McLean:

**Standard Operating Procedure (Version 2) – Denied**  
**De Beers Canada Inc. – Diamond Mining, Kennady Lake, NT**

The Mackenzie Valley Land and Water Board (MVLWB or the Board) met on April 20, 2017 and reviewed the Standard Operating Procedure (Version 2), which was submitted to fulfill Part E, item 8 of Water Licence MV2005L2-0015 and as directed in the Board's November 3, 2016 decision letter.

The Board hereby denies the Standard Operating Procedure (Version 2) as submitted and requests De Beers to submit a revised Standard Operating Procedure which addresses the previous recommendation related to bi-annual sampling of different grain size fractions, which was made during the review of the Rock Placement Verification Program Report (MVLWB 11). **The revised Standard Operating Procedure shall be submitted by May 19, 2017.**

The full cooperation of De Beers is anticipated and appreciated. If you have any questions or concerns, please contact Angela Love at (867) 766-7456 or email [angela.love@mvlwb.com](mailto:angela.love@mvlwb.com).

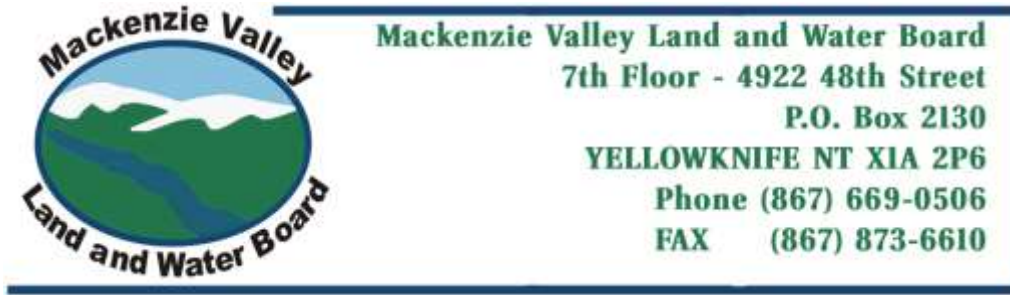
Yours sincerely,

A handwritten signature in blue ink, appearing to read "Mavis Cli-Michaud".

Mavis Cli-Michaud  
MVLWB Chair

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Attached: Reasons for Decision



**Reasons for Decision**

Issued pursuant to section 72.25 of the *Mackenzie Valley Resource Management Act* (MVRMA) and section 54 of the *Waters Act*

<b>Management Plan</b>	
<b>Reference/File Number</b>	MV2005L2-0015
<b>Applicant</b>	De Beers Canada Inc. (De Beers)
<b>Project</b>	Gahcho Kué Mine - Standard Operating Procedure (Version 2)

**Decision from Mackenzie Valley Land and Water Board  
Meeting of**

April 20, 2017

**1.0 Background**

Standard Operating Procedure (SOP) – Background

The SOP is required by Part E, item 6 of Licence MV2005L2-0015 and was first approved by the Board on October 16, 2014 following issuance of Licence MV2005L2-0015 (September 24, 2014). Updates are required by Part E, item 8 of the Licence. The intent of requiring a SOP document was to ensure that De Beers presented the sampling and analysis program, the criteria for potential acid generation (PAG), the manner in which the samples are used to delineate areas of PAG rock, and the placement of rock, to the Board prior to commencing construction. This document was then intended to be considered in conjunction with the overarching Geochemical Characterization and Management Plan, with the latter detailing any additional specific aspects regarding the management of Acid Rock Drainage (ARD) at the Mine. The Geochemical Characterization and Management Plan was first approved by the Board on February 10, 2015 following Licence issuance.

Rock Placement Verification Program and Rock Placement Verification Program Report (Report)

Part E, item 7 of Licence MV2005L2-0015 states:

*Upon commencement of Construction, the Licensee shall initiate a Rock Placement Verification Program in accordance with the requirements set out in Schedule 4, item 1, to assess the effectiveness of the SOP referred to in Part E, item 6. Within eighteen (18) months following issuance of this Licence, the Licensee shall submit a Rock*

*Placement Verification Program Report that describes the results of the Program to the Board for approval.*

The results of this Report will inform the Board of the accuracy of predictions made and the success of rock segregation practices detailed in the SOP. De Beers submitted the Report on April 25, 2016.

During the review of the Report, Board staff requested further information as to what grain size was sampled and tested from the blasted rock. De Beers responded that no specific particle size fraction was selected. Sample rock was selected by rock fragment characteristics and by selecting a sample representative of the dominant rock type at the location. The Board requested De Beers update the SOP, for Board approval by November 17, 2016, providing further details of protocols and recommended that the 2009 MEND (Mine Environment Neutral Drainage) Prediction Manual be reviewed for guidance.

On November 16, 2016, De Beers submitted an extension request, including rationale, for the submission of the revised SOP from November 17, 2016 to April 15, 2017. The Board approved the extension request to April 13, 2017. On March 13, 2017 De Beers submitted the SOP (Version 2).

#### Submission Description

The SOP (Version 2) has been revised to include updates on the following:

1. Frequency of field sampling in the open pits;
2. Clarification on sampling techniques and analysis of pit rock samples; and
3. Clarification of the locations of PAG material.

### **2.0 Comments**

The SOP (Version 2) was forwarded to the Board's consultant, who provided the initial comments on the Report. On April 4, 2017, the consultant noted that De Beers' updated SOP did not address the issue related to sampling different grain size fractions in bi-annual sampling. This recommendation was previously made during the review of the Rock Placement Verification Program Report (MVLWB 11: "It would be recommended that additional analyses of specific particle size fractions should be conducted such that there can be an evaluation of whether there is partitioning of sulphides and/or carbonates into any one particle size").

### **3.0 Public Review**

By April 4, 2017, comments and recommendations on the SOP were received from 3 reviewers:

- Environment and Climate Change Canada;
- Fisheries and Oceans Canada; and
- Government of the Northwest Territories (GNWT) – Environment and Natural Resources (ENR);

De Beers responded on April 7, 2017. The reviewer comment summary table presents the concerns identified through the review of the SOP.

#### 4.0 Decision

After reviewing the submissions of De Beers, the written comments received by the Board, and the Staff Report prepared for the Board, the Board, having due regard to the facts and circumstances, the merits of the submissions made to it, and to the purpose, scope, and intent of the MVRMA and the *Waters Act* and Regulations made thereunder, has determined the Standard Operating Procedure (Version 2) does not respond to the previously raised recommendation related to bi-annual sampling of different grain size fractions. Therefore, the Board has decided to deny the Standard Operating Procedure and require the submission of a revised version to include this information.

SIGNATURE

Mackenzie Valley Land and Water Board



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Mavis Cli-Michaud, Chair

April 20, 2017

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Date



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MV2005L2-0015

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[NWT Metis Nation - Not for Canadian Zinc Files]	Tim Heron	NWTMN IMA Coordinator	(867)872-3586; <a href="mailto:rcc.nwtmn@northwestel.net">rcc.nwtmn@northwestel.net</a> ;

## Amanda Gauthier

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**From:** Amanda Gauthier  
**Sent:** Monday, April 24, 2017 4:30 PM  
**To:** 'Sarah.McLean@debeersgroup.com'  
**Cc:** Angela Love; 'admin\_dkfn@northwestel.net'; 'Alexandra.Hood@debeersgroup.com'; 'Amanda\_Gonari@golder.com'; 'andrew\_howton@gov.nt.ca'; 'anusa\_sivalingam@gov.nt.ca'; 'arnoldenge@gmail.com'; 'Carolc.lands@gmail.com'; 'Charity\_Beres@golder.com'; 'Charlene\_Coe@gov.nt.ca'; 'chief.lkdfn@gmail.com'; 'Clayton\_Lloyd@gov.nt.ca'; 'Colin\_merz@gov.nt.ca'; 'david.alexander@cannor.gc.ca'; 'doug\_carr@gov.nt.ca'; 'ec.ea.nwt.ec@canada.ca'; 'fisheriesprotection@dfo-mpo.gc.ca'; 'fortsmithmetiscouncil@northwestel.net'; 'frmcenvironment@northwestel.net'; 'ginger.gibson@thefirelightgroup.com'; 'gnwt\_ea@gov.nt.ca'; 'gracemackenzie@tlichocom'; 'ima\_dkfn@northwestel.net'; 'Iqbal\_Arshad@gov.nt.ca'; 'jhood@fortsmith.ca'; 'joe\_heron@gov.nt.ca'; 'john\_faithful@golder.com'; 'Jon\_Posynick@gov.nt.ca'; 'Jen Potten (jpotten@mvlwb.com)'; 'Kate\_Witherly@gov.nt.ca'; 'katie\_rozestraten@gov.nt.ca'; Kierney Leach; 'land@wpfn.ca'; 'landsnresources@katlodeeche.com'; 'lauraduncan@tlichocom'; 'Lindsay\_Armer@gov.nt.ca'; 'Mark.D'Aguiar@dfo-mpo.gc.ca'; 'Melanie.Murphy@wscc.nt.ca'; 'melissa.pinto@canada.ca'; 'monica\_wendt@gov.nt.ca'; 'NTCard@aandc.gc.ca'; 'pat\_knutson@gov.nt.ca'; 'patrick\_clancy@gov.nt.ca'; 'Paul\_Green@gov.nt.ca'; 'president.nwtmn@northwestel.net'; 'rcc.nwtmn@northwestel.net'; Shannon Allerston; 'shin.shiga@nsma.net'; 'Tracy\_Covey@gov.nt.ca'; 'tyannasteinwand@tlichocom'; 'veronique.damours-gauthier@dfo-mpo.gc.ca'; 'Andrew.Williams@debeersgroup.com'; Angela Love; 'apower@ykdene.com'; 'chief.srfn@northwestel.net'; 'Clayton\_Lloyd@gov.nt.ca'; 'Erik.Madsen@debeersgroup.com'; 'esangris@ykdene.com'; 'fieldworker.frmc53@northwestel.net'; 'frmc@northwestel.net'; 'frmcenvironment@northwestel.net'; 'Glen\_Mackay@gov.nt.ca'; 'hrmc@northwestel.net'; 'jblack@ykdene.com'; 'Jeremy\_Roberts@gov.nt.ca'; 'joe\_heron@gov.nt.ca'; 'johnny\_lennie@gov.nt.ca'; 'Kate\_Witherly@gov.nt.ca'; 'katie\_rozestraten@gov.nt.ca'; 'kserben@golder.com'; 'lands@denation.com'; 'laurie\_mcgregor@gov.nt.ca'; 'Leah.Russell@debeersgroup.com'; 'lkdfnlands@gmail.com'; 'loretta.ransom@canada.ca'; 'Matthew.Spence@cannor.gc.ca'; 'monica\_wendt@gov.nt.ca'; 'Nathen\_Richea@gov.nt.ca'; 'Olivia\_Lee@gov.nt.ca'; 'Patrick.Kramers@debeersgroup.com'; 'Permits'; 'preliminaryscreening@reviewboard.ca'; 'Rick\_Walbourne@gov.nt.ca'; 'Robert\_Jenkins@gov.nt.ca'; 'Russell\_Teed@gov.nt.ca'; 'Sarah.McLean@debeersgroup.com'; 'Scott\_Stewart@gov.nt.ca'; 'screeningofficer@eastarm.com'; 'seanrichardson@tlichocom'; 'SjoerdvanderWielen@tlichocom'; 'Steven\_Shen@gov.nt.ca'; 'Tara\_Naugler@gov.nt.ca'; 'tslack@nihadixa.ca'

**Subject:** MV2005L-0015 - De Beers Canada Inc. - Gahcho Kue - Denial - Standard Operating Procedures v2  
**Attachments:** MV2005L2-0015 - De Beers Canada Inc. - Gahcho Kue - Denial - Standard Operating Procedures v2.pdf

Good day,

Please see the attached document. if you have any questions, please contact Angela Love at (8678) 766-7456 or email [angela.love@mvlwb.com](mailto:angela.love@mvlwb.com).

Regards,  
Amanda Gauthier  
Executive Coordinator  
Mackenzie Valley Land and Water Board  
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