



Staff Report

Applicant: De Beers Canada Inc. - Gahcho Kué Mine	
Location: Kennady Lake, NT	Application: MV2005L2-0015
Date Prepared: June 12, 2017	Meeting Date: June 22, 2017
Subject: Standard Operating Procedure (Version 2.1)	

1. Purpose/Report Summary

The purpose of this Report is to present to the Mackenzie Valley Land and Water Board (MVLWB/the Board) the Standard Operating Procedure (SOP) (Version 2.1) as submitted by De Beers Canada Inc. (De Beers) for the Gahcho Kué Mine, to fulfill Part E, item 8 of Water Licence (Licence) MV2005L2-0015.

2. Background

- October 16, 2014 – Board approves the SOP (Version 1);
- April 25, 2016 – De Beers submits the Rock Placement Verification Program Report (Report);
- November 3, 2016 – Board approves the Report on an interim basis and required an updated SOP for Board approval by November 17, 2016;
- November 16, 2016 – De Beers requests an extension to the submission date of the SOP from November 17, 2016 to April 15, 2017;
- December 5, 2016 – Board approves the extension request to April 13, 2017;
- March 13, 2017 – De Beers submits the SOP (Version 2);
- April 20, 2017 – Board denies the SOP (Version 2) as submitted and requested a revised SOP be submitted which addresses previous recommendations provided during the review of the Report;
- May 23, 2017 – De Beers submits the SOP (Version 2.1);
- June 6, 2017 – Review comments and recommendations due and received;
- June 8, 2017 – De Beers' responses received; and
- **June 22, 2017 – Board package presented to the Board.**

3. Discussion

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 the September 24, 2014 issuance of Licence MV2005L2-0015. Updates to the SOP are required by Part E, item 8 of the Licence. The intent of requiring the SOP was to ensure that De Beers explained to the Board, prior to commencing construction, the rock 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. 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) Report be reviewed for guidance.

Standard Operating Procedure (SOP) - Submission Description

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).

On April 20, 2017, the Board denied the SOP (Version 2) as submitted and requested a revised SOP be submitted which addresses previous recommendations provided during the review of the Report. On May 23, 2017, De Beers submitted the SOP (Version 2.1) (attached), which has been revised to include further details on field sampling at the mine infrastructure to account for the collection of different size fractions to be analyzed during the bi-annual audit.

4. Comments

The SOP (Version 2.1) was forwarded to the Board's consultant, who provided initial comments on the Report. On May 30, 2017, the consultant noted that De Beers' updated SOP was appropriate and would provide the necessary information to verify if there is partitioning of sulphides and/or carbonates into any one particle size.

5. Reviewer Comments

By June 6, 2017, "no comment" submissions on the SOP (Version 2.1) were received from the following three reviewers:

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

The Review Summary and Attachment (attached) presents these submissions. De Beers responded on June 8, 2017 acknowledging the no comment submissions.

6. Security

The GNWT currently holds reclamation security in the amounts of \$23,776,270.00 under Licence MV2005L2-0015 for the Gahcho Kué project. De Beers' next deposit of security (in the amount of \$40,713,234 under Licence MV2005L2-0015) is due prior to year 4 of Operations (the end of mining of the Hearne Pit).

7. Conclusion

Board staff conclude that the SOP (Version 2.1) addresses the previously raised recommendation related to bi-annual sampling of different grain size fractions.

8. Recommendation

Board staff recommend that the Board approve the SOP (Version 2.1) as submitted.

A draft decision letter is attached for the Board's consideration.

9. Attachments

- [Standard Operating Procedure \(Version 2.1\)](#)
- Review Summary and Attachment
- Draft Decision Letter from the Board

Respectfully submitted,



Angela Love
Regulatory Specialist

Review Comment Table

Board:	MVLWB
Review Item:	De Beers Gahcho Kue - Standard Operating Procedure - V.2.1 (MV2005L2-0015)
File(s):	MV2005L2-0015
Proponent:	De Beers Canada Inc - Gahcho Kue
Document(s):	Standard Operating Procedure - V.2.1 (371 KB)
Item For Review Distributed On:	May 23 at 15:45 Distribution List
Reviewer Comments Due By:	June 6, 2017
Proponent Responses Due By:	June 9, 2017
Item Description:	<p>De Beers Canada Inc. (De Beers) has submitted Version 2.1 of its Standard Operating Procedure (SOP), for Board approval, on May 23, 2017. The SOP is required by Part E, item 8 of Licence MV2005L2-0015.</p> <p>PROPOSED CHANGES TO THE PLAN</p> <p>The Board requests input from parties on the proposed changes to the SOP (specifically section A3) which addresses the Board's original recommendation that additional analyses of specific particle size fractions should be conducted (as outlined in the letter attached to the SOP).</p> <p>Reviewers are invited to submit questions, comments, and recommendations on this submission using the Online Review System (ORS) by the review comment deadline specified below.</p> <p>All documents that have been uploaded to this review are also available on our public registry. If you have any questions or comments about the ORS or this review, please contact Board staff identified below.</p>
General Reviewer Information:	<p>In addition to the email distribution list, the following organizations received review materials by fax:</p> <p>Fort Resolution Métis Council - Trudy King (867)394-3322</p> <p>Hay River Metis Council - Trevor Beck, President (867)874-4472</p> <p>NWT Metis Nation - Tim Heron, NWTMN IMA Coordinator (867)872-3586</p>
Contact Information:	<p>Angela Love 867-766-7456</p> <p>Jen Potten 867-766-7468</p> <p>Kierney Leach 867-766-7470</p>

Comment Summary

Environment and Climate Change Canada: Bradley Summerfield				
ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Staff Analysis
1	General	Comment ECCC has reviewed and has no comments at this time. Recommendation N/A	June 8: Acknowledged	Noted.
Fisheries and Oceans Canada: SALLY WONG				
ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Staff Analysis
1	General	Comment DFO has reviewed the Standard Operating Procedure - V.2.1 in accordance with its mandate and has no comments. Recommendation Not applicable.	June 8: Acknowledged	Noted.
GNWT - ENR: Central Email GNWT				
ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Staff Analysis
1	General File	Comment (doc) ENR Letter - No Comments or Recommendations at this time. Recommendation		Noted.



June 6, 2017

Jen Potten
Regulatory Officer
Mackenzie Valley Land and Water Board
7th Floor – 4910 50th Avenue
P.O. Box 2130
Yellowknife, NT
X1A 2P6

Dear Ms. Potten,

**Re: DeBeers - Gahcho Kue
Water Licence – MV2005L2-0015
Standard Operating Procedure Version 2.1
Request for Comment**

The Department of Environment and Natural Resources, Government of the Northwest Territories has reviewed the document at reference based on its mandated responsibilities under the *Environmental Protection Act*, the *Forest Management Act*, the *Forest Protection Act*, the *Species at Risk (NWT) Act*, the *Waters Act* and the *Wildlife Act* and has no comments or recommendations for the consideration of the Board at this time.

Should you have any questions or concerns, please do not hesitate to contact Patrick Clancy, Environmental Regulatory Analyst at (867) 767-9233 Ext: 53096 or email patrick.clancy@gov.nt.ca.

Sincerely,

Patrick Clancy
Environmental Regulatory Analyst
Environmental Assessment and Monitoring Section
Conservation, Assessment and Monitoring Division
Department of Environment and Natural Resources
Government of the Northwest Territories