



Diavik Diamond Mines (2012) Inc.
P.O. Box 2498
Suite 300, 5201-50th Avenue
Yellowknife, NT X1A 2P8 Canada
T (867) 669 6500 F 1-866-313-2754

Joseph Mackenzie, Chair
Wek'èezhii Land and Water Board
PO Box 32
Wekweètì, NT X1A 3S3
Canada

20 July 2020

Dear Mr. Mackenzie:

Subject: DDMI Submission – Updated Terms of Reference for Water Quality Modelling Independent Review Panel – PKMW Water Licence Amendment Application

Please find attached Diavik Diamond Mines (2012) Inc.'s (DDMI) updated version of the Terms of Reference (ToR) for the establishment of a Water Quality Modelling Independent Review Panel (the Panel) as part of the Wek'èezhii Land and Water Board's (WLWB or Board) Review of DDMI's Water Licence Amendment Application for the Processed Kimberlite to Mine Workings Proposal (the PKMW Project). This version of the ToR is to address the Board's Directives in its Decision¹ to approve the previous version of the ToR. This submission also includes a table of conformity to the Board's Directives.

DDMI notes that while the WLWB has directed that the ToR must state that "the Panel will consist of a minimum of three (3) Panel members", DDMI requests that the Panel be limited to three (3) members the WLWB deems appropriate to conduct an independent review of DDMI's water quality modelling for the PKMW Project. This will allow the diversity of Panel expertise to readily span the two (2) areas of expertise and provide an appropriately thorough independent review of water quality modelling while ensuring the Panel can function and reach consensus efficiently with direct and indirect costs (paid by DDMI) that remain reasonable.

Please do not hesitate to contact the undersigned or Kofi Boa-Antwi (867 447 3001 or kofi.boa-antwi@riotinto.com) if you have any questions related to this submission.

¹ [The WLWB Decision re Terms of Reference for the Water Quality Modeling Independent Review Panel, June 8, 2020](#)

Yours sincerely,



Sean Sinclair
Principal Advisor, Environment and Closure Readiness

cc: Anneli Jokela, WLWB
Kassandra DeFrancis, WLWB

Attachments:

- Table of Conformity to the Directives in the WLWB's June 8, 2020 Decision
- Updated Terms of Reference for the Water Quality Modelling Independent Review Panel for the PKMW Project

ATTACHMENT 1

Table of Conformity to the Directives in the WLWB's June 8, 2020 Decision

Directive #	Board Directive	Location in the Updated ToR
Revision #1	<p>Include a section on Guiding Principles that includes the following guiding principles:</p> <ul style="list-style-type: none"> a. The Panel will be independent of DDMI, the WLWB, or any other Parties, and will provide their recommendations impartially based solely on their expertise and experience; b. The Panel will be transparent, providing adequate evidence to support review comments and recommendations; c. The Panel will work to achieve consensus among IRP members about review comments and recommendations; and d. The Panel will work collaboratively and in a respectful manner, with a willingness to listen and understand all perspectives/opinions and relevant issues. 	Page 2 (Guiding Principles section)
Revision #2	<p>Indicate, where appropriate, that the Panel will consist of a minimum of three Panel members.</p>	Page 2 (Composition section)
Revision #3	<p>Include DDMI's response to the Environmental Monitoring Advisory Board's (EMAB) comment 3 in the 'Panel Chair' section to further clarify the Panel's reporting relationships.</p>	Page 3 (Chair section)

Revision #4	Include DDMI's response to TG comment 6 in the 'Panel Duties' section.	Page 4 (Panel Duties section)
Revision #5	Include the following in the 'Panel Duties' section: The Panel may be required to participate in Technical Sessions and a Public Hearing as part of the Water Licence Amendment Process. The Board will decide the Panel's roles and responsibilities at the Technical Session and Public Hearing.	Page 4 (Panel Duties section)
Revision #6	Include DDMI's response to EMAB comment 7 in the 'Schedule' section;	Page 4 (Schedule section)
Revision #7	Include the following in the 'Communications' section: The Panel must be supplied with all information they deem necessary to complete their mandate and scope.	Page 5 (Communications section)
Revision #8	Include the following in the 'Dispute Resolution' section: The Panel will operate by consensus but if an issue arises where a consensus cannot be achieved, each Panel member shall set out his or her views in any report submitted to the WLWB. If the nature of a dispute between Panel members is such that it hinders the completion of the Panel report, any member of the Panel may notify the WLWB in writing. In the latter case, the WLWB will determine the process for resolution.	Page 5 (Dispute Resolution section)
Revision #9	Correct any typos.	Corrected identified clerical errors

ATTACHMENT 2
Updated Terms of Reference for the Water Quality
Modelling Independent Review Panel for the
PKMW Project

Terms of Reference
Water Quality Modelling Independent Review Panel
Depositing Processed Kimberlite into Pit(s) and Underground
Diavik Diamond Mine – W2015L2-0001

Introduction

In 2018, Diavik Diamond Mine applied to the Wek'èezhì Land and Water Board (WLWB or the Board) for an amendment of its existing water licence (the Water Licence Amendment) to allow for the deposition of processed kimberlite into pit(s) and the underground. Part way through the Water Licence Amendment process, the application was referred for an Environmental Assessment by the Mackenzie Valley Review Board (MVEIRB). The MVEIRB released its *Report of Environmental Assessment and Reasons for Decision EA1819-01 – Diavik – Depositing Processed Kimberlite into Pit(s) and Underground* (the Report of EA1819-01) in January 2020; the Water Licence Amendment process will reinitiate once the Responsible Minister approves the report.

Measure 4 of the MVEIRB Report of EA1819-01 specifies that Diavik is to establish an independent review panel for water quality modelling related to its proposed project amendment.

Measure 4: Diavik will establish an independent review panel for water quality modelling

To prevent significant adverse impacts on cultural use of Lac de Gras, Diavik will establish and fund an independent review panel for the updated modelling described in Measure 3.

Diavik will develop the terms of reference for this panel for approval by the Wek'èezhì Land and Water Board. The Wek'èezhì Land and Water Board will engage Diavik and intervenors to identify and select panel members with appropriate expertise in:

- hydrodynamic water quality modelling, and
- extra-fine processed kimberlite or clay hydrodynamics.

The terms of reference and panel member selection will be approved in a timeframe that leaves adequate time for it to carry out the tasks below.

For each modelling update defined in Measure 3, the panel will review and make recommendations on:

- a) model selection and design,

- b) model input data, assumptions, and processes,
- c) monitoring requirements for informing the modelling process, and d) model results.

The panel will provide reports to the Wek'èezhì Land and Water Board for inclusion on its public registry. Diavik will report to the Wek'èezhì Land and Water Board and communities about how it responded to panel recommendations. If Diavik does not accept, or modifies, panel recommendations, it will explain why and provide reasons. The Wek'èezhì Land and Water Board will consider panel reports and Diavik's responses when reviewing and approving any plans for updated modelling.

The following quote from page 84 of the MVEIRB's Reasons for Decision gives context to Measure 4 and to the requirement for the Panel:

"The Review Board also agrees that the panel should be involved in all stages of updating the modelling, both to reduce uncertainty and to increase Indigenous people's confidence in the predictions, thus reducing concern. The panel will provide the Wek'èezhì Land and Water Board with information to assist in making decisions on putting PK in the pits and reconnection."

These Terms of Reference define the scope of work for the Independent Review Panel (IRP).

Guiding Principles

- a. The Panel will be independent of DDMI, the WLWB, or any other Parties, and will provide its recommendations impartially based solely on its expertise and experience;
- b. The Panel will be transparent; providing adequate evidence to support review comments and recommendations;
- c. The Panel will work to achieve consensus among IRP members about review comments and recommendations; and
- d. The Panel will work collaboratively and in a respectful manner, with a willingness to listen and understand all perspectives/opinions and relevant issues.

Composition

The Panel will consist of a minimum of three (3) members who are technically qualified and, to the extent possible, complementary in skill to review and make recommendations on Diavik Diamond Mines (2012) Inc.'s (DDMI or Diavik) water quality modelling of processed kimberlite deposition in completed open pits(s) and underground workings. The WLWB will engage DDMI

and other interested Parties¹ to identify and select panel members. The WLWB will determine the final composition of the Panel.

Chair

The Panel will select a Chair within 10 days after the Panel is formed and will identify the Chair to the WLWB and DDMI. The Chair will be responsible for compiling and submitting reports to the WLWB and will serve as the point of contact. The Panel may rotate the role of Chair amongst its members and will notify the WLWB and DDMI whenever the Chair changes. The WLWB will post all notices on the Public Registry.

In addition, the following reporting relationships will apply to maintain the independence of the Panel:

- The Chair will not report to any external party.
- The Panel members will only report to the Chair.
- The Chair will be the only point of contact for the Panel.

Panel Duties

The first task for the Panel is to review the water quality modelling that is being completed by DDMI as part of the Water License Amendment process. The modelling is intended to show whether water will meet water quality objectives defined in MVEIRB Measure 1. The water quality modelling and related Independent Panel review will be considered by interested Parties and the WLWB as part of the License Amendment Process, prior to issuance of an amended water licence. As part of the Amendment Process, the WLWB will review and consider approval of the water quality modelling. This independent model review will address the first independent modelling review required by MVEIRB Measure 3:

*a) **Before depositing processed kimberlite into the pit(s) and underground***

With respect to the modelling performed by DDMI, the Panel will review and make recommendations on:

- model selection and design,
- model input data, assumptions, and processes,
- monitoring requirements for informing the modelling process, and
- model results.

¹ “other interested Parties” include both intervenors to the Mackenzie Valley Impact Review Board Environmental Assessment - EA1819 and the Kitikmeot Inuit Association.

In addition to reviewing and making recommendations on DDMI's water quality modelling, the Panel may be required to participate in Technical Sessions and a Public Hearing as part of the Water Licence Amendment Process. The Board will decide the Panel's roles and responsibilities at the Technical Session and Public Hearing.

It is recognized that independent model reviews will also be required at two future dates as specified in MVEIRB Measure 3:

- a) **Before filling the pit(s)** with water from Lac de Gras: This update will include the detailed conditions of the processed kimberlite in the pit(s) and the planned pore water layer depth.*
- b) **Before reconnecting (partially or fully)** the pit lake(s) containing processed kimberlite to Lac de Gras: This update to the model will include real data from monitoring of the pit lake(s) to calibrate the model predictions.*

It is anticipated that these two future water quality modelling exercises will be done during the term of the amended water licence; although continuity of membership in the Panel is preferred, these Terms of Reference and Panel membership will need to be updated and approved by the WLWB prior to those reviews.

Schedule

The Panel is expected to be available for the duration of the Diavik Mine Water License Amendment, which is expected to reinitiate in 2020. The future reviews of updated water quality modelling (before filling the pit(s) with water from Lac de Gras and before reconnecting the pit lake(s) containing processed kimberlite to Lac de Gras) are not anticipated until around 2025 and 2027, respectively.

Although continuity of membership in the Panel is preferred, these Terms of Reference and Panel membership will need to be updated and approved by WLWB prior to those reviews expected in 2025 and 2027.

Communications

The Panel shall communicate/meet as necessary to complete its duties. The Panel is encouraged to communicate/meet directly with DDMI and other interested Parties to obtain information necessary to perform its duties. If required to attend the Technical Session as part of the WLWB's process, the WLWB will record the Panel's communications and post them to the WLWB's public registry. To maintain independence from DDMI, communication between the Panel and interested Parties will be coordinated through WLWB Staff. WLWB Staff will be

responsible for retaining minutes of any external communications/meetings of the Panel and may post these minutes on the WLWB's public registry.

During the review of the water quality model, the Panel may engage Diavik on topics including, but not limited to: model selection and design; model input data; assumptions, and processes; and monitoring requirements for informing the modelling process. Diavik will respond directly to any Panel engagement on the model to support the Panel's review.

In advance of any Public Hearing and prior to submission of the final water quality modelling results by DDMI to the Board, DDMI will provide the model to the Panel for final review. The Panel will then provide its preliminary report, including recommendations, to DDMI for review and comment; DDMI may propose changes based on additional evidence or revised plans to address deficiencies. The Panel will then consider comments, suggestions and changes, before submitting a final report to the WLWB. This final report represents completion of Panel duties related to the first of three independent modelling reviews required by MVEIRB Measure 3.

Diavik will report to the WLWB and communities about how it responded to panel recommendations. If Diavik does not accept, or modifies, panel recommendations, it will explain why and provide reasons. The WLWB will consider panel reports and Diavik's responses when reviewing and considering approval of the updated modelling.

The Panel must be supplied with all information it deems necessary to complete its mandate and scope.

Dispute Resolution

In the event of any dispute amongst the members of the Panel, the Panel members will attempt to reach an agreement amicably. Failing that, any member may notify the WLWB, in writing, of the dispute. The WLWB will determine the process for resolution and make the ultimate decision.

The Panel will operate by consensus but if an issue arises where a consensus cannot be achieved, each Panel member shall set out his or her views in any report submitted to the WLWB. If the nature of a dispute between Panel members is such that it hinders the completion of the Panel report, any member of the Panel may notify the WLWB in writing. In the latter case, the WLWB will determine the process for resolution.

Funding

DDMI will pay for all reasonable direct and indirect costs associated with completing the duties of the Panel. Costs do not include payments to any parties other than the Panel.

Continuance

At its discretion, and after consultation with DDMI and other interested Parties, the WLWB may revise the Terms of Reference. DDMI and/or other interested Parties may submit to the WLWB recommendations for revisions to the Terms of Reference at any time. Approved revisions to the Terms of Reference supersede the previous version and take effect either immediately or as directed by the WLWB.