



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

Mark Cliffe-Phillips  
Executive Director  
Mackenzie Valley Environmental Impact Review Board  
P.O. Box 938  
Yellowknife, NT X1A 2N7

6 June 2022

Dear Mr. Cliffe-Phillips:

**Subject: DDMI 2021 PKMW Project EA Annual Report**

Diavik Diamond Mines (2012) Inc. (DDMI) is pleased to provide the Mackenzie Valley Environmental Impact Review Board (MVEIRB or the Board) annual reporting (the appended 2021 PKMW Project EA Annual Report) on the Processed Kimberlite to Mine Workings Proposal (PKMW) as per the MVEIRB's follow-up program requirements in the Report of Environmental Assessment and Reasons for Decision (REA) issued by the Board in January 2020 and approved by the Responsible Ministers in June 2020.

The 2021 PKMW EA Annual Report provides an update on the post-EA regulatory process to date, status on DDMI's implementation of the REA Measures and DDMI's commitments made during the PKMW EA or Review.

As highlighted in the appended Annual Report, DDMI has completed or advanced the implementation of some of the REA Measures and its commitments, including the Indigenous Group-specific engagement protocols, cultural use criteria, a PKMW Engagement Plan, and updates to existing Diavik management plans to reflect the PKMW, including the Contingency Plan; however, a majority of the REA Measures and DDMI commitments will apply during the construction, operation, and closure phases of the PKMW Project. DDMI will provide updates on its implementation of the REA Measures and its commitments in subsequent annual reports to the Board.

Please do not hesitate to contact the undersigned if you have any questions related to this submission.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Kofi Boa-Antwi', is centered below the closing text.

Kofi Boa-Antwi  
Superintendent, Environment

cc: Catherine Fairbairn, MVEIRB  
Kate Mansfield, MVEIRB

Attachments: 2021 PKMW Project EA Annual Report

**Diavik Diamond Mines Inc.**

Processed Kimberlite to Mine Workings (PKMW)

## **2021 PKMW Project EA Annual Report**

**MVEIRB File No.: EA1819-01**

**Document #: ENVI-1323-0622 R0**

June 2022

## Table of Contents

<b>Plain Language Summary</b>	<b>3</b>
<b>1. INTRODUCTION</b>	<b>6</b>
1.1 Processed Kimberlite to Mine Workings Project Background	6
1.2 Post-EA Regulatory Process Update	7
<b>2. REA MEASURES IMPLEMENTATION</b>	<b>10</b>
2.1 REA Measure 1: Diavik will meet water quality objectives at closure	10
2.2 REA Measure 2: Diavik will work collaboratively with Indigenous groups to develop criteria for determining water in the pit lake(s) is acceptable for cultural use	11
2.3 REA Measure 3: Diavik will update modelling periodically to show whether water in the pits and Lac de Gras will meet the water quality objectives	11
2.4 REA Measure 4: Diavik will establish an independent review panel for water quality modelling	12
2.5 REA Measure 5: Diavik will conduct additional and more effective engagement with potentially affected Indigenous communities	14
2.6 REA Measure 6: Adaptive management of cultural impacts	14
<b>3. DIAVIK COMMITMENTS</b>	<b>14</b>
<b>4. CONCLUSION</b>	<b>15</b>
<b>APPENDIX A</b>	<b>16</b>
<b>APPENDIX B</b>	<b>17</b>

## Plain Language Summary

Diavik Diamond Mines (2012) Inc. (DDMI) received Ministerial approval of the Processed Kimberlite to Mine Workings Project (PKMW Project), following an Environmental Assessment by the Mackenzie Valley Environmental Impact Review Board (MVEIRB). The Ministerial approval is for the deposition of processed kimberlite into one or more of two underground and/or open mine workings (A418 and A154) located at the Diavik Diamond Mine. Based on the current mine plan, A418 is the preferred immediate option and A154 is the alternate option. DDMI removed the A21 mine working from consideration during the MVEIRB's Review of the PKMW Project.

The PKMW Project can be summarized as follows. First, DDMI will deposit processed kimberlite in the form of a slurry into the mine workings. Most water deposited as part of the processed kimberlite slurry will be pumped out of the pit, but some of this "porewater" will remain on top of the processed kimberlite. DDMI will then add freshwater from Lac de Gras overtop of the processed kimberlite in the pits to create a deep pit lake where stable layers of water will form naturally, isolating the processed kimberlite from the surface environment. Over one to two years, this porewater will concentrate at the bottom of the pit lakes, leaving a deep clean freshwater layer overtop. The freshwater and porewater layers will not mix under normal conditions, effectively sealing the processed kimberlite and related porewater very deep in the lake. After re-filling the pits with lake water, DDMI will monitor the water quality in the pit lakes to verify that the top 40 meters of the water column is protective of fish, people and wildlife. Once near surface water quality has been confirmed to be safe, these pit lakes will be reconnected to Lac de Gras by creating several gaps in the dikes, allowing fish and water to move freely between the pit lake and Lac de Gras.

After several rounds of public reviews during the Wek'èezhìi Land and Water Board's (WLWB) preliminary screening of DDMI's PKMW Project application, the MVEIRB decided to conduct an environmental assessment (Review) on DDMI's proposed PKMW Project. As part of the Review process, DDMI conducted an environmental assessment of the PKMW Project, which was presented in a [Summary Impact Statement](#).

Following a thorough public review of the PKMW Project, the MVEIRB, in its [Report of Environmental Assessment and Reasons for Decision \(REA\)](#), recommended that the PKMW Project be approved to proceed to the regulatory/permitting phase with

specific terms and conditions, including the implementation of REA Measures 1 to 6, to mitigate potential adverse impacts of the PKMW Project on components of the environment considered important to stakeholders, including potentially affected Indigenous Groups. The MVEIRB's recommendations were approved by the responsible minister(s) on June 4, 2020, allowing the PKMW Project to move to the permitting phase, which included the continuation of the WLWB's Water Licence Amendment process for the PKMW Project.

DDMI then participated in the WLWB Water Licence Amendment Process and provided updated information about the PKMW to the WLWB, including responses to the WLWB's Information Requests, submission of a project development schedule of the Immediate Deposition Plan for Processed Kimberlite to the A418 Mine Working, submission of updated water quality modelling to fulfill REA Measure 3a (i.e. updating modelling to show whether water will meet water quality objectives defined in REA Measure 1 before depositing processed kimberlite into the pit(s) and underground), and submission of updates on DDMI's progress in its ongoing engagement with potentially affected Indigenous Groups to enable, among other things, the establishment of engagement protocols and the development of cultural water quality criteria for the PKMW Project.

After a thorough review process, including a Public Hearing, the WLWB, on April 28, 2021, sent its recommendations, including a Draft Amended Water Licence, to the Responsible Minister for approval of the PKMW Project. Following approval by the Responsible Minister on June 8, 2021, the WLWB issued an [Amended Diavik Water Licence](#) with conditions for the PKMW Project. DDMI notes that ministerial approval and the WLWB's issuance of the Amended Diavik Water Licence does not mean that DDMI can unconditionally proceed with the PKMW Project, but rather sets out the conditions which, if met, will allow DDMI to proceed in a way that the WLWB is comfortable will be protective of the environment and future cultural use.

Since the WLWB's issuance of the Amended Diavik Water Licence, DDMI has engaged the identified potentially impacted Indigenous Groups to establish Indigenous Group-specific engagement protocols and has received the WLWB's approval of the PKMW Engagement Plan to inform the construction, operation and closure of the PKMW Project. DDMI has also engaged potentially impacted Indigenous Groups through workshops and meetings to inform the development of cultural use criteria to be followed by DDMI to prevent significant adverse impacts of the PKMW Project on the cultural use of Lac de Gras. DDMI intends to submit the developed cultural use criteria to the WLWB for review and approval in 2022.

DDMI is of the opinion that, with the implementation of the MVEIRB's REA Measures, PKMW-related conditions in the Amended Diavik Water Licence issued by the WLWB, and adaptive management, informed by DDMI's ongoing engagement with potentially affected Indigenous Groups, the PKMW Project will not result in significant adverse impacts to components of the environment considered important to stakeholders, including potentially affected Indigenous Groups, and will be protective of future cultural use.

## 1. INTRODUCTION

### 1.1 Processed Kimberlite to Mine Workings Project Background

Diavik Diamond Mines (2012) Inc.'s (DDMI) Processed Kimberlite to Mine Workings Project (PKMW Project) involves the deposit of processed kimberlite (PK) in the form of a slurry into one or more of two underground and/or open mine workings (A418 and A154) located at the Diavik Diamond Mine in Q1 2023. Based on the current mine plan, A418 is the preferred and likely option and A154 is the alternate. The A21 mine working was removed by DDMI from consideration during the Mackenzie Valley Environmental Impact Review Board's (MVEIRB) Review of the PKMW Project.

Most water deposited as part of the PK slurry will be pumped out of the pit, but some of this "porewater" will remain on top of the PK. DDMI will then add freshwater from Lac de Gras overtop of the PK in the pits to create a deep pit lake where stable layers of water will form naturally, isolating the PK from the surface environment. Over one to two years, this porewater will concentrate at the bottom of the pit lakes, leaving a deep clean freshwater layer overtop. The freshwater and porewater layers will not mix under normal conditions, effectively sealing the PK and related porewater very deep in the lake. After re-filling the pits with lake water, DDMI will monitor the water quality in the pit lakes to verify that the top 40 meters of the water column is protective of fish, people and wildlife. Once near surface water quality has been confirmed to be safe, these pit lakes will be reconnected to Lac de Gras by creating several gaps in the dikes, allowing fish and water to move freely between the pit lake and Lac de Gras.

As part of the process to gain required approvals to proceed with the PKMW Project, DDMI, on June 1, 2018, submitted an application to the Wek'èezhii Land and Water Board (WLWB) to amend the Water Licence (WL2015L2-0001) for the Diavik Diamond Mine to include the proposed activities, after pre-application engagement with various stakeholders, including Indigenous Groups. DDMI notes that it did not receive opposition from communities or regulators during the initial engagement phase on the project concept prior to submission of an application for the PKMW Project to the WLWB. In general, what we heard was support to "put it (processed kimberlite) back where it came from" as long as it could be done in an environmentally safe manner (see [Traditional Knowledge Panel Session Report – Options for Processed Kimberlite; PR #85](#)).

After several rounds of Information Requests and a Technical Session during the WLWB's preliminary screening of the application, on February 19, 2019, the



MVEIRB decided, on its own motion as per applicable provisions of the Mackenzie Valley Resource Management Act, to conduct an environmental assessment (EA or Review) on DDMI's proposed PKMW Project. As part of the MVEIRB review process, DDMI conducted an environmental assessment of the PKMW Project, which was presented in a [Summary Impact Statement](#). The Summary Impact Statement focused on the potential for the PKMW Project to adversely impact the following Valued Components selected the MVEIRB, in consultation with potentially affected Indigenous Groups and other stakeholders, during the scoping phase of the EA:

- water quality and quantity;
- cultural use of the area;
- fish and fish habitat; and
- other wildlife (specifically caribou, aquatic and migratory birds, and species at risk).

Following a thorough public review of the PKMW Project, the MVEIRB, in its [Report of Environmental Assessment and Reasons for Decision](#) (REA), recommended that the PKMW Project be approved to proceed to the regulatory/permitting phase with specific terms and conditions, including the implementation of REA Measures 1 to 6, to mitigate potential adverse impacts of the PKMW Project on the Valued Components. On June 4, 2020, the responsible minister(s) subsequently approved the MVEIRB's recommendations that the PKMW Project be allowed to advance to the permitting phase, which included a recommencement of the WLWB's Water Licence Amendment process for the PKMW Project.

## 1.2 Post-EA Regulatory Process Update

Following the responsible minister(s) decision that the PKMW Project be allowed to proceed to the permitting phase, the WLWB recommenced the Water Licence Amendment Process for the PKMW Project with the issuance of an [Information Request](#) (IR) to DDMI on June 5, 2020 to, among other things, address the MVEIRB's REA Measures 1 to 6.

In summary, the WLWB requested that DDMI provide the following information to address the IR:

- A summary of the PKMW Project, including the proposed activities, infrastructure, and proposed timelines for the Project.
- Status update for all commitments made throughout the EA process.
- A description of proposed changes, with rationale, to conditions in the Diavik Water Licence W2015L2-0001 for consideration in the Water Licence Amendment Process for the PKMW Project.
- An updated Engagement Plan that meets the requirements for “additional and more effective engagement with potentially affected Indigenous communities” as outlined in REA Measure 5.
- Draft cultural-use criteria developed as per the requirements of Measure 2 of the REA for determining if water in the pit lake(s) is acceptable for cultural use.
- Updated water quality modelling results.

DDMI subsequently addressed the information requested by the WLWB in a series of submissions during the post-EA Water Licence Amendment Process, including a project development schedule of the Immediate Deposition Plan for PK to the A418 Mine Working for the WLWB approval ([DDMI Response to WLWB IR Attachment #1, September 17, 2020](#)).

During the post-EA Water Licence Amendment Process, DDMI requested that the WLWB complete the Amendment of Water License (W2015L2-0001) incorporating as appropriate the MVEIRB REA Measures and necessary revisions and/or additions of Conditions to enable deposition of PK in mine workings as outlined in DDMI’s comments and recommendations on the draft Water Licence ([DDMI Response to WLWB IR Attachment #2, October 16, 2020](#)). DDMI stated its preference for general Conditions that allow both DDMI, the WLWB and other stakeholders to adapt the application of the License to a variety of situations that can arise. DDMI requested that the WLWB approve the water quality modelling update (REA Measure 3a) and related Independent Review Panel (IRP) review (REA Measure 4) concurrent with the Water License Amendment. DDMI also requested that only Water Licence Conditions related to the PKMW Project proposal be included in the updated Licence.

Following a thorough review process, including a Public Hearing, the WLWB, on April 28, 2021, submitted its recommendations, including a Draft Amended Water Licence, to the Responsible Minister for approval of the PKMW Project ([WLWB Recommendation for Approval of Type A Water Licence](#) and [WLWB Reasons for Decision](#)). The Responsible Minister approved the Draft Amended Water Licence on June 8, 2021, and the WLWB issued an [Amended Diavik Water Licence](#) with conditions for the PKMW Project on the same date.

Since the WLWB's issuance of the Amended Diavik Water Licence, DDMI has continued engagement with the following potentially affected Indigenous Groups:

- Deninu Kue First Nation (DKFN)
- Fort Resolution Métis Government (FRMG)
- Kitikmeot Inuit Association (KIA)
- Łutsel K'e Dene First Nation (LKDFN)
- North Slave Métis Alliance (NSMA)
- Northwest Territory Métis Nation (NWTMN)
- Tłı̨chǫ Government (TG)
- Yellowknives Dene First Nation (YKDFN)

To date, DDMI has engaged the aforementioned potentially impacted Indigenous Groups and has established Indigenous Group-specific engagement protocols with each group except FRMG. On March 30, 2022, DDMI received the WLWB's [approval](#) of the [PKMW Engagement Plan Version 1.1](#) to inform the construction, operation, and closure of the PKMW Project. DDMI has also engaged potentially impacted Indigenous Groups through workshops and meetings to inform the development of cultural use criteria to be followed by DDMI to prevent significant adverse impacts of the PKMW Project on the cultural use of Lac de Gras. DDMI intends to submit the developed cultural use criteria to the WLWB for review and approval in Q2 2022.

Summary tables of DDMI's implementation of the REA Measures and DDMI Commitments are appended to this report as Appendix A and B, respectively.

## **2. REA MEASURES IMPLEMENTATION**

This section presents an update on DDMI's implementation of the Measures in the MVEIRB's Report of Environmental Assessment and Reasons for Decision (REA) approved by the Responsible Ministers.

### **2.1 REA Measure 1: Diavik will meet water quality objectives at closure**

DDMI has completed the first updated water quality modelling and review with the WLWB appointed Independent Review Panel (IRP). The outcomes of the updated water quality modelling and IRP review were discussed at length over the three (3) day Public Hearing on December 16 – 18, 2020 as part of the WLWB Water Licence Amendment Process for the PKMW. The WLWB has since issued an Amended Diavik Water Licence for the PKMW Project with conditions related to meeting water quality objectives at closure.

DDMI has proposed a comprehensive Surveillance Network Program (SNP) for the A418 pit following both pit filling with water from LDG and following dike breaching, and a complementary PK monitoring program adaptively managed within the Processed Kimberlite Containment (PKC) Plan. This water quality monitoring program is reflected in an updated PK Management Plan (Version 7) to be submitted to the WLWB for approval in Q2 2022. In summary, the program focuses on:

- Monthly depth bioprofiles through the full depth of the water column using a multi-probe intended to measure the development and stability of the chemocline supplemented by quarterly water quality sampling to get initial information on water quality within the flooded pit.
- Intensive water quality sampling – around 75 samples – distributed over a 2D transect of the A418 pit lake to obtain a comprehensive understanding of the pit water quality prior to dike breaching.
- Monitoring of the volume in cubic metres of fine and coarse fractions of Processed Kimberlite disposed of in the Mine Workings on an annual basis.
- Characterization of the consolidation properties and pore water quality of the Processed Kimberlite deposited in the Mine Workings.
- If additional sampling and analysis is identified as necessary to validate assumptions, predictions, or meaningfully improve accuracy of predictions details will be proposed within the PKC Plan.

A summary table of DDMI's implementation of the EA Measures is included in Appendix A.

## **2.2 REA Measure 2: Diavik will work collaboratively with Indigenous groups to develop criteria for determining water in the pit lake(s) is acceptable for cultural use**

DDMI has advanced its engagements with the potentially Indigenous Groups (IG) around establishment of engagement protocols and cultural water quality criteria.

As noted in Section 1.2, DDMI has established Indigenous Group-specific engagement protocols with all potentially impacted Indigenous Groups except FRMG. DDMI will continue to engage FRMG on establishing an engagement protocol. DDMI has since received the WLWB's approval of the PKMW Engagement Plan Version 1.1 to inform the construction, operation, and closure of the PKMW Project.

DDMI also engaged potentially impacted Indigenous Groups through workshops and meetings throughout 2021 and 2022 to inform the development of cultural use criteria to be followed by DDMI to prevent significant adverse impacts of the PKMW Project on the cultural use of Lac de Gras. DDMI intends to submit the developed cultural use criteria to the WLWB for review and approval in Q2 2022.

A summary table of DDMI's implementation of the EA Measures is included in Appendix A.

## **2.3 REA Measure 3: Diavik will update modelling periodically to show whether water in the pits and Lac de Gras will meet the water quality objectives**

To fulfill REA Measure 3a (updating modelling, i.e., Stage 1, to show whether water will meet water quality objectives defined in REA Measure 1 before depositing processed kimberlite into the pit(s) and underground), as part of re-initiating the Water Licence Amendment in 2000, DDMI updated the water quality modelling to meet the requirements for approval before depositing processed kimberlite into the pit(s) and underground. The modelling focused exclusively on the A418 mine area as the preferred immediate deposition area.

This model update was intended to much more accurately represent the most up to date PK deposition quantities and consolidation properties, the mine flooding sequence and Lac de Gras (LDG) reconnection plans and long-term exchange with LDG. Wherever reasonable, this model update also replaced previous model simplifying assumptions (e.g., site runoff negligible and excluded) with new modelled

processes (e.g., daily site runoff loads to pit lake based on closure chemical and water balance). This complex model framework included: 1) consolidation modelling to estimate the rate of PK consolidation (porewater release) over 200 years; 2) GoldSim volume and mass balance modelling to demonstrate initial conditions in the pit lake; and 3) long-term two-dimensional (2D) CE-QUAL-W2 (W2) modelling to demonstrate vertical movement of PK porewater in the pit lake linked with a three-dimensional (3D) MIKE3 flexible mesh modelling to simulate effects into and across LDG. This model framework was subjected to over thirty (30) sensitivity analysis runs intended to simulate the full range of plausible scenarios. The updated predictions of this model are considered sufficiently accurate to inform the necessary internal and external decisions at the current project stage gate.

The key result of this new modelling was that the water quality in the A418 pit lake surface 40 meters remained below AEMP benchmarks over the long term; the WLWB has since approved the aforementioned water quality modelling and issued an Amended Diavik Water Licence with conditions for the PKMW Project.

Following commencement of the PKMW Project, DDMI will complete the following additional water quality modelling:

- Stage 2 Modelling – prior to pit filling with Lac de Gras water (incorporating as-built conditions captured from monitoring during the operations phase); and
- Stage 3 Modelling – after pit filling but before dike breaching (to allow calibration of model inputs and assumptions from operations and closure phase monitoring).

A summary table of DDMI's implementation of the EA Measures is included in Appendix A.

#### **2.4 REA Measure 4: Diavik will establish an independent review panel for water quality modelling**

The MVEIRB Measure 3 requires water quality modelling to be periodically updated and reviewed by a the WLWB-approved Independent Review Panel (IRP) as per requirements of REA Measure 4.

The Terms of Reference for the IRP was approved by the WLWB on September 23, 2020 and the panel members were appointed on July 29, 2020. Four (4) virtual

meetings were held with the IRP between August 20 and October 1, 2020 to present, review and revise the water quality modelling. DDMI chose to make the meetings open to the public to create a more inclusive and transparent technical review process with opportunities for questions from the public to the IRP. DDMI believes this approach was uniquely successful in allowing interested parties to follow the process and participate as witnesses. DDMI submitted its final report on the updated water quality modelling on October 16, 2020 and as per the Terms of Reference the IRP provided its final report on October 15, 2020. This final report represented the completion of Panel duties related to the first of three (3) independent modelling reviews. The WLWB Public Hearing for Water Licence Amendment was held between December 16 – 18, 2020 and included participation by the IRP as expert witnesses to explain and be questioned on the outcome of their [Final Report](#). This exchange included three (3) days of extensive cross examination of the IRP by all interested parties. On the final day of the Public Hearing the IRP confirmed that as a result of the extensive discussions, the IRP had not identified the need to make any changes to their Final Report which concluded that DDMI's modelling was appropriate and that the software used was of sufficient quality and the IRP confirmed they had no objections with how DDMI proposed to implement the twelve (12) Recommendations included in the IRP's Final Report, most of which related to future data collection to better understand the potential range of uncertainties and inform subsequent model updates and inform adaptive management approaches.

The overarching review conclusions of the IRP were as follows (IRP Final Report page 26):

1. The modeling effort put forward to examine the long-term water quality in pit A418 under the Processed Kimberlite to Mine Workings scenario is appropriate and that the modeling software used are of sufficient quality.
2. The base case results of the updated model (which includes previously expressed recommendations from the Panel) may be interpreted to show that water quality in the upper 40 m of pit A418 are not expected to exceed the AEMP water quality guidelines.
3. Sufficient sensitivity runs have been completed to support the conclusion that water quality in the upper 40 m of A418 is unlikely to be exceeded under anticipated variability in forcing possible upset conditions.

A summary table of DDMI's implementation of the EA Measures is included in Appendix A.

## **2.5 REA Measure 5: Diavik will conduct additional and more effective engagement with potentially affected Indigenous communities**

DDMI has advanced its engagements with Indigenous Groups (IG) to inform/refine the PKMW design and implementation. As noted in Section 1.2, DDMI has established Indigenous Group-specific engagement protocols with each potentially impacted Indigenous Group except FRMG and received the WLWB's [approval](#) of the [PKMW Engagement Plan Version 1.1](#) to inform the construction, operation, and closure of the PKMW Project in Q1 2022.

A summary table of DDMI's implementation of the EA Measures is included in Appendix A.

## **2.6 REA Measure 6: Adaptive management of cultural impacts**

To mitigate significant cumulative adverse cultural impacts of the PKMW, the MVEIRB requires the Government of the Northwest Territories (GNWT) engage and work with Indigenous intervenors, and the communities they represent, to monitor and adaptively manage adverse impacts on cultural well-being from the PKMW Project, in combination with the Diavik Mine and other diamond mining projects.

Whiles the implementation of REA Measure 6 is the responsibility of the GNWT, DDMI recognizes that its support and that of the other diamond mining projects and operations in the region will enable the GNWT achieve the objectives of this measure. Hence, DDMI will provide information to the GNWT as needed to support the implementation of this measure.

## **3. DIAVIK COMMITMENTS**

DDMI has completed or advanced the implementation of some its commitments made during the PKMW EA such as updates to water quality modelling and engagement with stakeholders, including potentially affected Indigenous Groups, to establish Indigenous Group-specific engagement protocols and develop cultural use criteria to inform project design and implementation. However, DDMI notes that a majority of its commitments will apply during the operation and closure phases of the PKMW Project.

A summary table of DDMI's implementation of its EA Commitments is included in Appendix B.



#### 4. **CONCLUSION**

DDMI continues to engage potentially affected Indigenous Groups to refine project design, including the Construction, Operation, Closure and Post-Closure Phases of the PKMW Project. DDMI is encouraged by the results of its collaboration to date with the potentially impacted Indigenous Groups, including the establishment of Indigenous Group-specific engagement protocols and receipt of an approved PKMW Engagement Plan (Version 1.1) from the WLWB.

Diavik is of the opinion that, with the implementation of the MVEIRB's REA Measures, the PKMW-related conditions in the June 8, 2021 Amended Water Licence, and adaptive management, informed by DDMI's ongoing engagement with potentially affected Indigenous Groups, the PKMW Project will not result in significant adverse impacts to water quality and quantity; cultural use of the area; fish and fish habitat; and other wildlife (specifically caribou, aquatic and migratory birds, and species at risk).

**APPENDIX A**

**Table of PKMW EA Measures Implementation Status**

Measure	Party Responsible	Actions Taken During Reporting Period	Reference/Applicable Regulatory Documents
<p><b>Measure 1: Diavik will meet water quality objectives at closure</b></p>	<p>To prevent significant adverse impacts on the cultural use of Lac de Gras, Diavik will design and operate the Project so that water in at least the top 40 meters of the pit lake(s) at closure and post-closure meets the following objectives:</p> <p><b>Water quality objective 1: safe for people, aquatic life, and wildlife</b></p> <p><b>Water quality objective 2: suitable for cultural use</b> (see Measure 2)</p> <p>Diavik will not put processed kimberlite into the pits until it demonstrates through updated modelling (see Measure 3a) that water in the pit lake(s) will meet these objectives.</p> <p>Diavik will neither partially nor fully reconnect the pit lake(s) to Lac de Gras until it demonstrates through updated modelling (see Measure 3c) and monitoring that water in the pit lake(s) will meet these objectives.</p> <p>Diavik will update all relevant monitoring plans and management program to ensure these objectives are met, including updating the Aquatic Effects Monitoring Program Response Framework to include action levels, triggers for response and potential mitigation options. The Wek'èezhì Land and Water Board will review and approve any updates to plans required under the water licence and land use permit before processed kimberlite is put into the pit(s) and underground.</p>	<p>DDMI</p> <p>In 2021, Diavik Diamond Mines (2012) (DDMI) advanced engagements with Indigenous Groups around cultural water use criteria (see Measure 2) and engagement protocols (see Measure 5) culminating in the WLWB's <a href="#">approval</a> of the <a href="#">Diavik Engagement Plan Version 1.1</a> for the PKMW Project. DDMI's engagement with stakeholders, including potentially impacted Indigenous Groups, to inform the establishment of water quality criteria regarding cultural use is ongoing. A draft of cultural use criteria informed by Diavik's engagement with potentially impacted Indigenous Groups will be submitted to the WLWB for review and approval prior to deposition of PK in the A418 Mine Workings.</p> <p>DDMI submitted its <a href="#">final report</a> on the updated water quality modelling for the deposition of PK to the WLWB on October 16, 2020, as part of the post-EA Water Licence Amendment Process. <a href="#">The Diavik Water Licence Amendment</a> to enable execution of the PKMW Project was approved by the WLWB on June 8, 2021. Model Iterations 4 (i.e., Stage 2: before filling pit(s) with Lac de Gras water) and Model Iteration 5 (i.e. Stage 3: before reconnecting pit(s) and Lac de Gras) are anticipated to be completed in years 2025+ (see Measure 3) and will undergo WLWB review and approval prior to implementation of these stages of the Project.</p> <p>Proposed updates to DDMI monitoring and management plans to inform monitoring and mitigation measures for the PKMW Project were provided in Section 3.2 of the Project Summary provided on September 17, 2020 as part of DDMI's response to the WLWB's Information Request issued to DDMI as part of the post-EA Water Licence Amendment Process. To date, the <a href="#">Diavik Contingency Plan Version 23</a>, updated to reflect the PKMW Project, has received conditional WLWB approval and an updated PK Management Plan Version 7 to address the PKMW Project, including water quality monitoring, will be submitted to the WLWB for review at least 6 months prior to commencement of PK deposition in the A418 mine workings.</p>	<p>October 16, 2020 <a href="#">DDMI Response to the WLWB Information Request Attachment #2 re: PKMW Post EA Information Package – Additional Information</a></p> <p>Section 3.2 of PKMW Project Summary as part of <a href="#">DDMI Partial Response to the WLWB Information Request Re: Water License Amendment Request for the Deposition of PK into Mine Working</a></p> <p><a href="#">Amended Diavik Water Licence, June 8, 2021</a></p> <p><a href="#">Diavik Engagement Plan Version 1.1</a></p> <p><a href="#">Diavik Contingency Plan Version 23</a></p>
<p><b>Measure 2: Diavik will work collaboratively with Indigenous groups to develop criteria for determining water in the pit lake(s) is acceptable for cultural use</b></p>	<p>Diavik will develop clear, measurable, and meaningful criteria to determine if water is suitable for cultural use (see Measure 1, water quality objective 2). Diavik will work directly, in a culturally appropriate manner, with Traditional Knowledge holders and other experts identified by Indigenous intervenors in developing these criteria. The Wek'èezhì Land and Water Board will review and approve these criteria before Diavik puts processed kimberlite into the pit(s) and underground.</p> <p>Diavik will support involvement of communities represented by the Indigenous intervenors to develop and implement long-term monitoring, informed by Traditional Knowledge, of the pit lake(s)</p>	<p>DDMI</p> <p>In 2021, Diavik Diamond Mines (2012) (DDMI) advanced engagements with potentially impacted Indigenous Groups (IGs) around cultural water criteria. Once a draft of cultural use criteria informed by Diavik's engagement with potentially impacted Indigenous Groups is established, it will be submitted to the WLWB for review and approval prior to commencement of deposition of PK in the A418 Mine Workings. A summary of progress made in Diavik's engagement with IGs on cultural use criteria is highlighted below:</p> <ul style="list-style-type: none"> <li>▪ Kitikmeot Inuit Association: Completed cultural water quality criteria workshop on October 13-14, 2020. Completed cultural water quality criteria verification session on September 16, 2021.</li> <li>▪ Łutsel K'e Dene First Nation: Completed cultural water quality criteria workshop on September 24 and December 3, 2020. Completed</li> </ul>	

	<p>using the criteria developed above. These programs will be in place before reconnection occurs.</p>		<p>cultural water quality criteria verification session on October 20, 2021.</p> <ul style="list-style-type: none"> <li>▪ North Slave Métis Alliance: Completed cultural water quality criteria workshop on September 22-23, 2020. Completed cultural water quality criteria verification session on October 20, 2021.</li> <li>▪ Tłıcho Government: Completed cultural water quality criteria workshop on November 5, 12-13, 2020. Completed cultural water quality criteria verification session on November 8, 2021.</li> <li>▪ Yellowknives Dene First Nation: Completed cultural water quality criteria workshop on June 3-4, 2021. Proposed cultural water quality criteria submitted by Diavik to YKDFN for review/discussion on August 23, 2021. Diavik's discussion with YKDFN are ongoing.</li> <li>▪ Deninu Kué First Nation: Completed cultural water quality criteria workshop on May 12-13, 2021. Completed cultural water quality criteria verification session on November 30, 2021.</li> <li>▪ Northwest Territory Métis Nation: Completed cultural water quality criteria workshop on May 3-4, 2021. Proposed cultural water quality criteria submitted by Diavik to NWTMN for review/discussion on August 23, 2021. Diavik's discussion with NWTMN are ongoing.</li> <li>▪ Fort Resolution Métis Government: A draft of the proposed cultural water quality criteria shared with FRMG leadership in a meeting on September 16, 2021. Diavik continues its efforts to engage FRMG on the development of cultural water quality criteria.</li> </ul> <p>See Measure 6 regarding DDMI support for long-term monitoring program.</p>	
<p><b>Measure 3: Diavik will update modelling periodically to show whether water in the pits and Lac de Gras will meet the water quality objectives</b></p>	<p>To mitigate significant adverse impacts on the cultural use of Lac de Gras, Diavik will update its modelling to show whether water will meet water quality objectives defined in Measure 1 at the following stages of the Project:</p> <p>a) <b>Before depositing</b> processed kimberlite into the pit(s) and underground</p> <p>b) <b>Before filling the pit(s)</b> 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.</p> <p>c) <b>Before reconnecting (partially or fully)</b> 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.</p> <p>These updates will address deficiencies identified by model review and include all available and relevant input data, to better understand (at minimum):</p> <ul style="list-style-type: none"> <li>i i. consolidation and behaviour of fine processed kimberlite and extra-fine processed kimberlite in the pit lake(s)</li> <li>ii ii. water quality in the pit lake(s)</li> <li>iii iii. long-term stability of meromixis in the pit lake(s)</li> </ul>	<p>DDMI</p>	<p>On October 16, 2020, DDMI submitted to the WLWB an updated Water Quality Model Iteration 3 for Stage 1 (i.e. water quality before processed kimberlite deposition) with a focus on the A418 Mine Workings as a part of DDMI's Immediate Deposition Plan. Results of this updated modelling indicated that water quality in the top 40 m of the A418 pit lake remained below AEMP benchmarks over a 200-year period. The Water Quality Model (i.e. water quality before processed kimberlite deposition) was approved by the WLWB as part of its <a href="#">June 8, 2021 issuance of an Amended Diavik Water Licence</a> for the PKMW Project.</p> <p>Model Iterations 4 and 5 i.e., Stage 2: before filling pit(s) with water from Lac de Gras) and Stage 3: before reconnecting (partially or full) the pit lake(s) containing processed kimberlite to Lac de Gras) are scheduled to coincide with applicable project phases in year 2025+ and will undergo Independent Review Panel (IRP) and WLWB approval.</p>	<p>October 16, 2020 Stage 1 updated modelling <a href="#">DDMI Partial Response to the WLWB Information Request Re: Water License Amendment Request for the Deposition of PK into Mine Working</a></p> <p><a href="#">Amended Diavik Water Licence, June 8, 2021</a></p>

	<p>iv iv. spatial extent of effects on water quality in Lac de Gras</p> <p>Diavik will update all relevant monitoring plans and management programs under the supervision and authority of the Wek'èezhìi Land and Water Board to ensure they are collecting all necessary input information for updated modelling.</p> <p>The Wek'èezhìi Land and Water Board will review and approve all plans for updated modelling.</p>			
<p><b>Measure 4: Diavik will establish an independent review panel for water quality modelling</b></p>	<p>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.</p> <p>Diavik will develop the terms of reference for this panel for approval by the Wek'èezhìi Land and Water Board. The Wek'èezhìi Land and Water Board will engage Diavik and intervenors to identify and select panel members with appropriate expertise in:</p> <ul style="list-style-type: none"> <li>• hydrodynamic water quality modelling, and</li> <li>• extra-fine processed kimberlite or clay hydrodynamics.</li> </ul> <p>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.</p> <p>For each modelling update defined in Measure 3, the panel will review and make recommendations on:</p> <ol style="list-style-type: none"> <li>a) model selection and design,</li> <li>b) model input data, assumptions, and processes,</li> <li>c) monitoring requirements for informing the modelling process, and</li> <li>d) model results.</li> </ol> <p>The panel will provide reports to the Wek'èezhìi Land and Water Board for inclusion on its public registry. Diavik will report to the Wek'èezhìi 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'èezhìi Land and Water Board will consider panel reports and Diavik's responses when reviewing and approving any plans for updated modelling.</p>	<p>DDMI</p>	<p>DDMI submitted the Terms of Reference (ToR) on March 26, 2020 along with six (6) Independent Review Panel (IRP) member candidates with expertise in hydrodynamic water quality monitoring and extra-fine processed kimberlite or clay hydrodynamics.</p> <p>On June 8, 2020 the WLWB released its decision to approve the ToR and provided Parties an opportunity to recommend additional IRP member candidates. The final list of Panel members were selected by the WLWB on July 29, 2020.</p> <p>In 2020, DDMI hosted four (4) open to public meetings with the IRP:</p> <ul style="list-style-type: none"> <li>▪ August 20 (Panel introduction),</li> <li>▪ September 10 (Diavik Modelling presentation),</li> <li>▪ September 24 (Panel initial findings) and</li> <li>▪ October 1 (Draft Review discussion)</li> </ul> <p>On October 15, 2020, the IRP provided a final report to the WLWB that detailed the IRP's review and conclusions regarding DDMI's PKMW Hydrodynamic and Water Quality modelling. The updated modeling and IRP review and conclusions were discussed over the three-day Public Hearing, December 16-18, 2020, hosted by the WLWB as part of the post-EA Water Licence Amendment Process. The IRP concluded that the modelling conducted by DDMI is adequate for the purposes of predicting water quality associated with the deposition of processed kimberlite (PK) in the A418 mine workings and that DDMI's prediction that water quality in the top 40 m of A418 pit, following PK deposition, will remain below AEMP benchmarks is reasonable.</p> <p>The WLWB approved the updated water quality modelling (Stage 1: water quality before processed kimberlite deposition) as part of the post-EA Water Licence Amendment Process and issued an <a href="#">Amended Diavik Water Licence for the PKMW Project on June 8, 2021</a>.</p> <p>Model Iterations 4 and 5 i.e., Stage 2: before filling pit(s) with water from Lac de Gras) and Stage 3: before reconnecting (partially or full) the pit lake(s) containing processed kimberlite to Lac de Gras) are scheduled to coincide with applicable project phases in year 2025+ and will undergo Independent Review Panel (IRP) and WLWB approval.</p>	<p><a href="#">Diavik Mines PKMW Hydrodynamic and Water Quality Monitoring Independent Review Panel Final Report</a></p> <p><a href="#">PKMW Public Hearing IRP Presentation</a></p> <p>October 16, 2020 Stage 1 updated modelling <a href="#">DDMI Partial Response to the WLWB Information Request Re: Water License Amendment Request for the Deposition of PK into Mine Working</a></p> <p><a href="#">Amended Diavik Water Licence, June 8, 2021</a></p>

<p><b>Measure 5: Diavik will conduct additional and more effective engagement with potentially affected Indigenous communities</b></p>	<p>Diavik will conduct additional and more effective engagement with potentially affected Indigenous communities<sup>59</sup> to accomplish Measures 2, 3, and 4 and prevent significant adverse impacts on cultural use of Lac de Gras from this Project. Diavik’s engagement for this Project will:</p> <p>a) include all potentially affected Indigenous communities,  b) ensure potentially affected Indigenous communities’ access to meaningful and plain language results from monitoring programs,  c) include Traditional Knowledge in monitoring plans and management programs,  d) enhance opportunities for potentially affected Indigenous communities to provide feedback directly to Diavik about the Project, its potential impacts, and mitigation options, and,  e) include reporting back to potentially affected Indigenous communities on how Diavik acted (or reasons for not acting) in response to feedback from communities.</p> <p>As part of its engagement for this Project, Diavik will collaborate with each potentially affected Indigenous community individually to develop meaningful engagement protocols that are culturally appropriate to each group. At a minimum, each of these engagement protocols will describe:</p> <p>i. how often Diavik will engage to discuss the Project,  ii. an updated contact list for each potentially affected Indigenous community, relevant to specific purposes for engagement (listing contacts such as community government staff, technical consultants, Traditional Knowledge advisors, community leadership), and,  iii. preferred engagement methods, frequency, and triggers.</p> <p>Diavik will submit an updated engagement plan incorporating this measure for review and approval by the Wek’èezhìi Land and Water Board with sufficient time for the engagement to inform Measures 2-4.</p>	<p>DDMI</p>	<p>Also see Measures 2 and 3.</p> <p>Following Ministerial approval of the PKMW Project and the WLWB’s issuance of an Amended Diavik Water Water Licence in June 2021, the Board reviewed and approved DDMI’s PKMW Engagement Plan Version 1.1, informed by engagement protocols with potentially Impacted Indigenous groups, on March 30, 2022.</p> <p>To date, DDMI has established engagement protocols with the following potentially impacted Indigenous Groups:</p> <ul style="list-style-type: none"> <li>▪ Łutsel K’e Dene First Nation</li> <li>▪ North Slave Métis Alliance Deninu Kue First Nation</li> <li>▪ Northwest Territory Métis Nation</li> <li>▪ Tłı̨cho Government</li> <li>▪ Kitikmeot Inuit Association</li> <li>▪ Yellowknives Dene First Nation</li> </ul> <p>DDMI will continue to attempt to reach agreement with FRMG regarding an engagement protocol.</p>	<p><a href="#">PKMW Engagement Plan Version 1.1</a></p> <p><a href="#">WLWB Approval of PKMW Engagement Plan Version 1.1.</a></p>
<p><b>Measure 6: Adaptive management of cultural impacts</b></p>	<p>To mitigate significant cumulative adverse cultural impacts of the Project, the Government of the Northwest Territories will engage and work with Indigenous intervenors, and the communities they represent, to <b>monitor and adaptively manage</b> adverse impacts on cultural well-being from the Project, in combination with the Diavik Mine and other diamond mining projects.</p> <p>The Government of the Northwest Territories will support the Indigenous intervenors to <b>develop community-specific cultural well-being indicators</b> to monitor and evaluate cultural well-being</p>	<p>GNWT</p>	<p>DDMI is not responsible for the implementation of Measure 6. However, DDMI will provide information to the GNWT as needed to support the implementation of this measure.</p>	<p>Not applicable.</p>

	<p>impacts associated with the Project, in combination with other diamond mining projects.</p> <p>The Government of the Northwest Territories will meet with potentially affected Indigenous communities<sup>61</sup> within one year of Ministerial approval of this Report of Environmental Assessment, and annually afterwards (or as agreed to by the Indigenous Intervenors), to:</p> <ul style="list-style-type: none"> <li>a) prioritize cultural well-being impacts related to the Project and other diamond mines, as identified by communities and by the Government of the Northwest Territories,</li> <li>b) evaluate the effectiveness of Government of the Northwest Territories programs or other programs to address these identified impacts, and</li> <li>c) discuss improvements to existing Government of the Northwest Territories programs to mitigate identified impacts, new Government of Northwest Territories programs, or support for new community-based programs.</li> </ul> <p>The Government of the Northwest Territories will <b>submit an annual progress report</b> on the three items above to the Indigenous intervenors, describing its engagement on and adaptive management of cultural impacts, and the Government of the Northwest Territories' plans to help address identified impacts.</p> <p>Wherever feasible, the Government of the Northwest Territories should coordinate and collaborate with Diavik and the other diamond mining operators in the Northwest Territories when carrying out this measure.</p> <p>Outcomes of this measure should be used, where relevant and available, to inform work on other measures.</p>			
--	---	--	--	--

**APPENDIX B**

**Table of Implementation Status for DDMI's  
Commitments in the PKMW EA**



No	Subject	Source	Commitment	Phase	Link to REA Measure	2021 Status
1	Follow-up and monitoring	Summary Impact Statement	<p>Follow-up to verify the environmental effects predictions and effectiveness of mitigation is an important component of this Project and is summarized below:</p> <ul style="list-style-type: none"> <li>• Sample PK porewater to confirm constituent concentrations used in model</li> <li>• Monitor the chemocline development and stability prior to breaching dike (Surveillance Network Program). Include visual monitoring by Traditional Knowledge Panel.</li> <li>• Monitor water quality in the flooded mine workings following dike breaching.</li> <li>• Monitor water quality in Lac de Gras following re-connection of pit lake(s) to Lac de Gras.</li> <li>• Adequately size breaches to optimize water circulation within the closure water cap to meet water quality objectives; and</li> <li>• Continue the AEMP in Lac de Gras (water quality, sediment, fish and invertebrates within the water and sediment).</li> </ul>	All phases	Measures 1 and 3	This commitment is addressed in REA Measures 1 and 3 (see Appendix A).
2	Timing of breaching of dikes	Summary Impact Statement	Breach dikes following receipt of monitoring results that show acceptable water quality (i.e., below AEMP benchmarks) within the pit lake(s).	Closure	Measures 1 and 3	Not completed. This commitment is addressed in REA Measures 1 and 3 (see Appendix A).
3	Decision-making process to isolate pit lakes from Lac de Gras	Summary Impact Statement	Close the breaches or isolate the pit lake from Lac de Gras if water quality is later determined to pose a risk to water quality, fish and fish habitat, caribou, humans or cultural land uses.	Closure and Post-closure	Measures 1, 2 and 3	This commitment is addressed in REA Measures 1, 2 and 3 (see Appendix A).
4	Community engagement	Summary Impact Statement	Report findings back to Indigenous communities.	All phases	Measure 5	Ongoing. This commitment is addressed in REA Measure 5 (see Appendix A).
5	Follow-up and monitoring	Summary Impact Statement	<p>In addition to continuation of the ongoing Aquatic Effects Monitoring Program (AEMP), DDMI will:</p> <ul style="list-style-type: none"> <li>• Monitor water quality in the pit lakes after the mine workings are filled to determine when and if water quality parameters meet aquatic effects benchmarks.</li> <li>• Monitor water quality, particularly TSS and TDS, in Lac de Gras at near-field, mid-field, and far-field areas during the breaching of the mine workings dikes.</li> </ul>	All phases	Measure 1	This commitment is addressed in REA Measure 1 (see Appendix A).
6	Follow-up and monitoring	Summary Impact Statement	DDMI would also work with DFO and Indigenous Groups to identify any follow-up monitoring that may be necessary to adaptively manage water levels in Lac de Gras and flows in the Coppermine River during the pit infilling periods.	All phases	Measure 5	This commitment is addressed in the REA Measure 5 (see Appendix A).
7	Deposition method	Summary Impact Statement	Select a deposition scenario that predicts water quality in the pit lake(s) meets AEMP benchmarks in the top 40m.	Operations	Measure 1	This commitment is addressed in REA Measure 1 (see Appendix A).
8	Fish interaction with pit lake(s)	Summary Impact Statement	Exclude fish from the pit lake(s) until the monitoring program shows that water quality in the top 40 m of the pit lake(s) meets AEMP benchmarks.	Closure	Measure 1	To be completed. This commitment is addressed in REA Measure 1 (see Appendix A).
9	Freshwater withdrawal for pit infilling	Summary Impact Statement	Work with DFO and Indigenous Groups to finalize water withdrawal rates that will not significantly affect fish habitat in Lac de Gras or the Coppermine River.	Closure	Measure 5	Ongoing. This commitment is addressed in REA Measure 5 (see Appendix A).
10	Follow-up and monitoring	Summary Impact Statement	<p>In addition to continuation of the on-going Wildlife Monitoring Program, DDMI will monitor:</p> <ul style="list-style-type: none"> <li>• Water quality in the pit lakes after the mine workings are filled to determine when and if water quality parameters meet aquatic effects benchmarks.</li> </ul>	Operations and Closure	Measure 1	To be completed. This commitment is addressed in REA Measure 1 (see Appendix A). DDMI has an existing Wildlife Monitoring Program. An

			Water quality, particularly TSS and TDS, in Lac de Gras at near-field, mid-field, and far-field areas during the breaching of the mine workings dikes.			updated Tier 3 Wildlife Management and Monitoring Plan, reflecting wildlife management during pit infilling, was submitted by Diavik to GNWT in 2021 and is currently undergoing Ministerial review.
11	Wildlife interactions with pits/mine workings	Summary Impact Statement	Any wildlife observed in the mine workings will be removed prior to pit lake infilling in accordance with applicable regulations. In the case of peregrine falcon nests on the pit walls, recommended minimum buffer distances in applicable guidelines will be followed until the birds have fledged and left the nests.	Operations	No specific link to REA Measures	DDMI has a Wildlife Monitoring Program. An updated Wildlife Management and Monitoring Program informed by Diavik's Tier 3 Wildlife Management and Monitoring Plan will be established prior to the construction phase of the PKMW.
12	Water quality monitoring	Summary Impact Statement	Water quality monitoring will be used to assess potential changes in water concentrations of chemical constituents.	All phases	Measure 1	This commitment is addressed in REA Measure 1 (see Appendix A).
13	Wildlife monitoring	Summary Impact Statement	Wildlife monitoring to assess potential interactions of wildlife with potential contaminants.	All phases	Measure 1	This commitment is addressed in REA Measure 1 (see Appendix A). DDMI has a Wildlife Monitoring Program. An updated Wildlife Management and Monitoring Program informed by Diavik's Tier 3 Wildlife Management and Monitoring Plan will be established prior to the construction phase of the PKMW.
14	Wildlife deterrence	Summary Impact Statement	Wildlife deterrent techniques will be implemented as required to reduce interactions with contaminants, if necessary.	Construction, Operations, and Closure	Summary Impact Statement	Ongoing. DDMI actively deters wildlife from the mine site and has a strict waste management system in place to limit any wildlife attractions on site.
15	Engagement with Indigenous groups	Summary Impact Statement	DDMI will continue its engagement with stakeholders, including with the Participation Agreement groups and communities and other Indigenous groups to inform project design and execution.	All phases	Measures 2 and 5	Ongoing. This commitment is addressed in REA Measures 2 and 5 (see Appendix A).
16	Engagement with Indigenous groups	Summary Impact Statement	DDMI will continue to engage with potentially affected Indigenous groups through the TK Panel Sessions and other engagement activities to better understand Indigenous perceptions about the safety, quality, and health of Lac de Gras and identify practical strategies to address these concerns.	All phases	Measures 2 and 5	Ongoing. This commitment is also addressed in REA Measures 1 and 2 (see Appendix A).
17	Water quality monitoring	Summary Impact Statement	Water quality will be monitored to assess potential changes in concentrations of chemical constituents in comparison to acceptable criteria	All phases	Measures 1 and 2	This commitment is addressed in REA Measures 1 and 2 (see Appendix A).
18	Wildlife monitoring	Summary Impact Statement	Wildlife monitoring will assess potential interactions of wildlife with potential contaminants.	All phases	Measure 1	This commitment is addressed in REA Measure 1 (see Appendix A). DDMI has a Wildlife Monitoring Program. An updated Wildlife Management and Monitoring Program informed by Diavik's Tier 3 Wildlife Management and Monitoring Plan will be established prior to the construction phase of the PKMW.

19	Water quality management	Summary Impact Statement	Cover the PK and porewater in each mine working with a freshwater cap such that water quality in the top 40 m meets AEMP benchmarks	Operations and Closure	Measure 1	This commitment is addressed in REA Measure 1 (see Appendix A).
20	Water quality management	Summary Impact Statement	Breach dikes to connect the pit lakes to Lac de Gras once monitoring shows that water constituents in pit lakes are below Canadian Water Quality guidelines for the Protection of Aquatic Life (CCME 2019) and/or the Aquatic Environmental Monitoring Program (AEMP) Effects Benchmarks	Closure	Measure 1	To be completed. The construction and operations phases of the PKMW Project are yet to commence.
21	Wildlife management	Summary Impact Statement	Remove any observed wildlife from pit/dike areas before infilling in accordance with applicable guidelines / regulations	Operations and Closure	No specific link to REA Measures	DDMI has a Wildlife Monitoring Program. An updated Wildlife Management and Monitoring Program will be established prior to the construction phase of the PKMW.
22	Wildlife monitoring	Summary Impact Statement	Monitor area for approaching wildlife during infilling	Operations and Closure	No specific link to REA Measures	DDMI has a Wildlife Monitoring Program. An updated Wildlife Management and Monitoring Program informed by Diavik's Tier 3 Wildlife Management and Monitoring Plan will be established prior to the construction phase of the PKMW.
23	Wildlife management	Summary Impact Statement	Employ deterrents as required to reduce risks to wildlife.	Construction, Operations, and Closure	No specific link to REA Measures	DDMI has a Wildlife Monitoring Program. An updated Wildlife Management and Monitoring Program informed by Diavik's Tier 3 Wildlife Management and Monitoring Plan will be established prior to the construction phase of the PKMW.
24	Stakeholder Engagement	Responses to Interventions	<p>Expanded engagement with non-signatory Indigenous groups</p> <ul style="list-style-type: none"> <li>• DDMI undertakes extensive community engagement with signatory Indigenous Groups; however, DDMI accepts that more could be done to engage with Fort Resolution Metis Council (FRMC) – Northwest Territory Metis Nation (NWTMN) and Deninu Kue First Nation (DKFN).</li> <li>• DDMI commits to meeting with each group annually to: <ul style="list-style-type: none"> <li>i. Provide updates on the PK to Mine Working Project specifically but also on closure planning generally;</li> <li>ii. Review recommendations made by the Traditional Knowledge (TK) Panel and DDMI's responses; and</li> <li>iii. Consider any recommendations from FRMC/NWTMN and DKFN and provide written responses.</li> </ul> </li> </ul>	All phases	Measure 5	Engagement with signatory and non-signatory Indigenous groups is ongoing (See Appendix A for actions taken during the reporting period for REA Measure 5).
25	Traditional Knowledge-based Closure Criteria	Responses to Interventions	<p>Reconnection criteria to define culturally acceptable pit-lake conditions</p> <ul style="list-style-type: none"> <li>• DDMI recognizes the importance of the views of Indigenous Groups to the decision on whether to breach the pit lakes and re-join with Lac de Gras.</li> <li>• DDMI commits to working toward the development of acceptance criteria for re-connection that are TK-based.</li> <li>• DDMI will: <ul style="list-style-type: none"> <li>i. Seek the TK Panel's permission to change the scope of the September 12-16, 2019 TK Panel session to instead develop recommended TK-based re-connection criteria;</li> </ul> </li> </ul>	Regulatory/Permitting Stage	Measures 2 and 5	Actions, including the establishment of cultural use criteria through engagement with potentially impacted Indigenous Groups are ongoing. This commitment is addressed in REA Measures 2 and 5 (see Appendix A).

			<ul style="list-style-type: none"> <li>ii. Ask that the Environmental Monitoring Advisory Board (EMAB) facilitate the revision/support of the recommended TK-based criteria with the five (5) Indigenous Parties represented on EMAB;</li> <li>iii. Provide opportunity for Indigenous Groups that are not represented on EMAB to review and comment on TK-based criteria;</li> <li>iv. Submit the TK-based re-connection criteria to the Wek'èezhù Land and Water Board (WLWB) for public review and approval as a closure criteria.</li> </ul>			
26	Fish and Fish Habitat	Responses to Interventions	<p><b>Fish habitat off-setting plan</b></p> <ul style="list-style-type: none"> <li>• With the implementation of proposed mitigation measures, residual environmental effects are not expected to significantly impact pit lake fish habitat, however DDMI acknowledges that some Indigenous Groups have still expressed concern about reconnecting the pit lakes to Lac de Gras.</li> <li>• DDMI appreciates Fisheries and Oceans Canada's willingness to work with DDMI to consider alternative fish habitat off-setting plans should pit lake reconnection no longer be considered acceptable.</li> <li>• DDMI commits to considering alternative off-setting plans that are reasonable, practical and provide fisheries benefits to Indigenous Communities.</li> <li>• DDMI will advance alternative off-setting plans by February 1, 2020 if: <ul style="list-style-type: none"> <li>i. There is a high likelihood that predicted pit-lake water quality conditions will not meet TK-based pit-lake criteria for reconnection; or</li> <li>ii. It is determined that TK-based acceptance of pit-lake reconnection can only be determined by visually inspecting the pit-lake making it not possible to confirm acceptability based on predicted water quality; or The MVEIRB determines that DDMI should not breach the dike and allow access to the pit-lake.</li> </ul> </li> </ul>	All phases	Measure 2	DDMI notes that alternatives to existing fish habitat offsetting plan are not being advanced currently as there is no indication water quality will not be acceptable. This commitment is addressed in REA Measures 2.
27	A21 Open Pit	Responses to Interventions	<p><b>Removal of A21 Open-Pit from review</b></p> <ul style="list-style-type: none"> <li>• DDMI continues to advise that A418 is the preferred location at this time for PK deposition to mine workings.</li> <li>• DDMI accepts Interveners' recommendation to remove the A21 Open-Pit from consideration for processed kimberlite (PK) deposition in the current Review.</li> </ul> <p>DDMI believes it is prudent to continue to consider A154 to provide the maximum practical flexibility. Limiting the deposition location option to only the preferred A418 could result in an inability to adapt to changes in mine plans because of the long lead times inherent in permitting processes.</p>	Environmental Review Stage	Measure 1	Completed. Action associated with this commitment was concluded at the Environmental Review Stage of the PKMW Approval Process.
28	Water Licence conditions and Project Follow-up	Responses to Interventions	<p><b>Conditions to be included in an amended water licence or as Follow-up measures</b></p> <ul style="list-style-type: none"> <li>• DDMI has reviewed Interveners' recommended conditions, if the Project is to be approved by the MVEIRB. It is DDMI's view that most of these can be addressed as conditions to be included in an amended Water Licence. These include: <ul style="list-style-type: none"> <li>a. Additional modelling of pit water quality. <ul style="list-style-type: none"> <li>• DDMI commits to providing updated modelling estimates: <ul style="list-style-type: none"> <li>i. for WLWB approval prior to commencing deposition as part of the Processed Kimberlite Containment in Mine Working Design Report;</li> <li>ii. prior to pit filling with Lac de Gras water (incorporating as-built conditions); and</li> <li>iii. after pit filling but before dike breaching (to allow calibration of model inputs and assumptions).</li> </ul> </li> </ul> </li> </ul> </li> </ul>	Regulatory/Permitting State and Pre-construction and Construction	Measures 1,3 and 4	Completed. These conditions were included in the Amended Water Licence W2015L2-0001 for the PKMW Project issued on June 8, 2021 by the WLWB.

			<p>b. Independent Review of final model predictions.</p> <ul style="list-style-type: none"> <li>DDMI recognizes the importance of water quality modelling in the decision to deposit PK in mine workings. DDMI would also like to ensure confidence in the model predictions. DDMI commits, as a condition of an amended Water Licence, to submit a review prepared by an Independent expert. The review would be of the updated modelling that would be submitted as part of the Processed Kimberlite Containment in Mine Working Design Report for the WLWB approval prior to commencement of PK deposition. Similar conditions exist in DDMI's Water Licence for independent geotechnical reviews of critical engineering designs.</li> </ul> <p>c. Pit Lake monitoring – operations, after filling, after re-connection.</p> <ul style="list-style-type: none"> <li>DDMI has provided proposed monitoring programs for PK to Mine Workings. Interveners have provided monitoring recommendations that DDMI has reviewed and responded. DDMI believes there is sufficient alignment on the general scope of the proposed monitoring that they could be consolidated into monitoring conditions for an amended Water Licence.</li> </ul> <p>d. Wildlife management.</p> <ul style="list-style-type: none"> <li>DDMI has Standard Operating Procedures for deterring wildlife. DDMI commits to revising these to include wildlife deterrents during pit filling. DDMI will submit these to the Government of Northwest Territories and EMAB for review and will address any recommendations that might come from this review as governed by the Environmental Agreement.</li> </ul> <p>e. Monitoring plans.</p> <ul style="list-style-type: none"> <li>In DDMI's view, the specific terms and conditions that will define the monitoring plans related to the PK to Mine Workings Project should be established by the WLWB through the Water Licence Amendment Process. The terms and conditions may include updates to existing environmental management and monitoring programs plans for the Diavik Diamond Mine.</li> </ul>			
29	Pre-deposition Water Quality Modelling	Hearing	If pre-deposition modelling shows that Diavik cannot meet AEMP benchmarks in the top 40 m of the pit lakes, Diavik will not put processed kimberlite in the pit.	Pre-construction	Measures 1 and 3	This commitment is addressed in REA Measures 1 and 3 (see Appendix A).
30	Engagement Plan with Deninu Kue First Nation and the Fort Resolution Métis Council	Hearing	Diavik commits to developing an engagement plan with Deninu Kue First Nation and the Fort Resolution Métis Council, building on the commitment to meet annually	All phases	Measure 5	Ongoing. This commitment is addressed in REA Measures 2 and 5 (see Appendix A).
31	Indigenous Engagement – LKDFN	Post-hearing commitments	DDMI commits to continuing to engage with the LKDFN to identify alternative or complementary approaches to closure and post closure activities associated with the PKMW Project. As part of this commitment, DDMI intends to work with the TK Panel, Participation Agreement organizations and communities, and other Indigenous Groups toward the development of TK-based acceptance criteria for re-connection of the pit lake(s) to Lac de Gras at closure/postclosure. These intended additional engagement activities will be reflected in the Engagement Plan for the Diavik Operations.	All phases	Measures 2 and 5	Ongoing. This commitment is addressed in REA Measures 2 and 5 (see Appendix A).
32	Indigenous Engagement – LKDFN	Post-hearing commitments	DDMI commits to updating the wildlife monitoring program for Diavik to include the PKMW Project to validate/confirm predictions about potential for wildlife-project interaction. The updated monitoring program will support site monitoring during operations to determine whether wildlife, including caribou and migratory birds, interact with pit(s)/mine workings during infilling and prior to stabilization of water quality.	Pre-construction, Construction, Operations, and Closure Phases	Measures 2 and 5	Ongoing. This commitment is addressed in REA Measures 2 and 5 (see Appendix A).

33	Wildlife Monitoring Program	Post-hearing commitments	DDMI commits to updating the wildlife monitoring program for Diavik to include the PKMW Project to validate/confirm predictions about potential for wildlife-project interaction. The updated monitoring program will support site monitoring during operations to determine whether wildlife, including caribou and migratory birds, interact with pit(s)/mine workings during infilling and prior to stabilization of water quality.	Pre-construction, Construction, Operations, and Closure Phases	No specific link to REA Measures	DDMI has developed and submitted an updated 2020 Wildlife Management and Monitoring Plan to applicable parties including the GNWT and EMAB on April 1, 2021. This Plan is consistent with the Government of Northwest Territories' Wildlife Management and Monitoring Plan (WMMP) Process and Content Guidelines and addresses this commitment. An updated Wildlife Management and Monitoring Program informed by Diavik's Tier 3 Wildlife Management and Monitoring Plan will be established prior to the construction phase of the PKMW.
34	Engagement on Potential for PKMW-Wildlife Interaction	Post-hearing commitments	DDMI commits to continuing to engage with the LKDFN to identify alternative or complementary approaches to limiting wildlife, including caribou, interaction with the PKMW Project during the operations phase.	Operations Phase	Measures 5	Ongoing. This commitment is addressed in REA Measures 5 (see Appendix A).