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

22 August 2019

Dear Mr. Cliffe-Phillips:

Subject: **DDMI Response to Interventions for the Environmental Assessment of the Processed Kimberlite to Mine Workings Proposal (MVEIRB File No.: EA1819-01)**

Diavik Diamond Mines (2012) Inc. (DDMI) is pleased to provide the Mackenzie Valley Environmental Impact Review Board (MVEIRB or the Board) with responses to Interveners' Recommendations in Interventions submitted to the Board as part of the MVEIRB's Review of DDMI's Processed Kimberlite to Mine Workings Proposal (the Project). DDMI's responses, including associated Attachement A (pictures and a video of consolidation of processed kimberlite), to Interveners' Recommendations have been uploaded to the MVEIRB's FTP site in the Online Review System.

DDMI received Interventions from the following Interveners by the August 1, 2019 deadline for parties' submission of Interventions:

- Deninu Kue First Nation
- Environmental Monitoring Advisory Board
- Lutsel K'e Dene First Nation
- Fisheries and Oceans Canada
- Environment and Climate Change Canada
- Yellowknives Dene First Nation
- Government of Northwest Territories
- Tłı̨chǫ Government
- Fort Resolution Metis Council
- Northwest Territory Metis Nation

DDMI also received a late Intervention submission from the North Slave Metis Alliance on August 7, 2019.

DDMI wishes to highlight the following points included in its resposes to the Interventions:

1. **Expanded engagement with non-signatory Indigenous Groups**
   - 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).
   - DDMI commits to meeting with each group annually to:
     i. Provide updates on the PK to Mine Working Project specifically but also on closure planning generally;
     ii. Review recommendations made by the Traditional Knowledge (TK) Panel and DDMI's responses; and
     iii. Consider any recommendations from FRMC/NWTMN and DKFN and provide written responses.

2. **Reconnection criteria to define culturally acceptable pit-lake conditions**
   - 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.
   - DDMI commits to working toward the development of acceptance criteria for re-connection that are TK-based.
   - DDMI will:
     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;
     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;
     iii. Provide opportunity for Indigenous Groups that are not represented on EMAB to review and comment on TK-based criteria;
     iv. Submit the TK-based re-connection criteria to the Wek'èezhìi Land and Water Board (WLWB) for public review and approval as a closure criteria.

3. **Fish habitat off-setting plan**
   - 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 Indigeneous Groups have still expressed concern about reconnecting the pit lakes to Lac de Gras.
   - 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.
   - DDMI commits to considering alternative off-setting plans that are reasonable, practical and provide fisheries benefits to Indigenous Communities.
   - DDMI will advance alternative off-setting plans by February 1, 2020 if:
     i. There is a high likelihood that predicted pit-lake water quality conditions will not meet TK-based pit-lake criteria for reconnection; or

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
iii. The MVEIRB determines that DDMI should not breach the dike and allow access to the pit-lake.

4. Removal of A21 Open-Pit from Review

- DDMI continues to advise that A418 is the preferred location at this time for PK deposition to mine workings.
- DDMI accepts Interveners' recommendation to remove the A21 Open-Pit from consideration for processed kimberlite (PK) deposition in the current Review.
- 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.

5. Conditions to be included in an Amended Water License or as Follow-Up Measures

- 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 License. These include:

a. Additional modelling of pit water quality.
   - DDMI commits to providing updated modelling estimates:
     i. for WLWB approval prior to commencing deposition as part of the Processed Kimberlite Containment in Mine Working Design Report;
     ii. prior to pit filling with Lac de Gras water (incorporating as-built conditions); and
     iii. after pit filling but before dike breaching (to allow calibration of model inputs and assumptions).

b. Independent Review of final model predictions.
   - 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 License, 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 License for independent geotechnical reviews of critical engineering designs.

c. Pit Lake monitoring – operations, after filling, after re-connection.
   - 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 License.

d. Wildlife management.
   - DDMI has Standard Operating Proceedures 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.

e. Monitoring Plans.
   - 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.

DDMI is of the opinion that with the implementation of proposed mitigation measures presented in the Summary Impact Statement and the additional DDMI commitments in its responses to Interventions, residual environmental effects and impacts to surface water quality; water quantity; fish and fish habitat; caribou, aquatic and migratory birds, and species at risk; and cultural use from the Processed Kimberlite to Mine Workings Project will not be significant.

We thank the Board, Interveners and other Parties for their ongoing input and look forward to the next steps of the Review, including the Hearing. 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.

Sincerely,

Sean Sinclair
Superintendent, Environment

cc: Catherine Fairbairn, MVEIRB
Kate Mansfield, MVEIRB
Ryan Fequet, WLWB
Anneli Jokela, WLWB

Diavik Diamond Mines Inc.

Processed Kimberlite to Mine Workings

Response to Interventions

MVEIRB File No.: EA1819-01

Document #: ENVI-989-0819 R0

22 August 2019

RioTinto

Table of Contents

RioTinto

1. Northwest Territory Metis Nation (NWTMN) – Recommendations

Cultural Use of the Project Area, Potential Impacts on Aboriginal Rights, and Wildlife

1. We recommend that DDMI fully engage with the NWTMN as previously noted.

2. To prevent significant adverse impact on the wildlife, we recommend DDMI create a physical barrier around the pit lake(s) containing processed kimberlite so that the wildlife cannot access the pit lake during infilling and dike breaching.

3. We also recommend DDMI test any animal carcasses found in the area surrounding the Lac De Gras to determine the cause of death and the health of the animal. The outcome of the testing should be shared with the Indigenous governments and organizations.

4. Following closure, Metis traditional harvesters are concerned with the long-term potential impact of any associated changes in hydrology and water quality. Thus, harvesters favour a scenario that allows Lac de Gras water quality to be safe for aquatic life, fish and fish habitat in as short a period of time as possible. They are concerned that putting processed kimberlite into the pits prior to reconnecting to Lac de Gras (scenario b) will prolong the time (if at all) until Lac de Gras can be safe for aquatic life, fish and fish habitat.

5. Metis traditional harvesters are concerned regarding the length of time it will take until Lac de Gras – and the entire watershed – can be safe for aquatic life, fish and fish habitat. This is a criteria that should be considered, including ensuring that Lac de Gras can, in the future, once again be safe for aquatic life, fish and fish habitat.

6. DDMI must undertake studies and monitoring to ensure traditional users feel safe hunting, trapping, fishing and gathering in the area. The NWTMN must be involved in the studies and monitoring. We recommend water quality and fish and fish habitat should be monitored for at least a 100-year period post closure.

7. DDMI negotiate an accommodation agreement with the NWTMN to address the concerns of the NWTMN.

1.1 DDMI's Response to NWTMN's Recommendations

1. As demonstrated with other Indigenous groups, DDMI is open to meet with NWTMN upon request to directly consider any concerns, recommendations or to clarify the proposed Processed Kimberlite to Mine Workings (PKMW) Project and our assessment of potential environmental effects.

2. Wildlife interacting with the pit lake(s) will be adaptively managed as the PKMW Project progresses. At this time there is no evidence to suggest that the pit lakes will be unsafe for wildlife such that physical barriers would be justified. DDMI will continue to implement its existing and proven successful Standard Operating Procedures (SOPs) for the management of wildlife at site. These procedures will be adaptively updated as required based on changing conditions or newly demonstrated risks to wildlife. In DDMI's view, these changes should be managed and reviewed through updates to the Annual Diavik Wildlife Monitoring Program and Report.

3. DDMI's assessment of potential Project effects on caribou including existing and proposed mitigation measures as well as a commitment to continue the on-going Wildlife Monitoring Program, demonstrates an understanding of the ecological and socio-cultural importance of caribou in the region. Given that this assessment has demonstrated the project will have no significant effects to wildlife, including caribou, it is unclear why DDMI should assess the cause of death and overall health of any animals found deceased within the zone of influence of the mine. In DDMI's view, the current Annual Diavik Wildlife Monitoring Program and Report adequately addresses monitoring requirements for wildlife within the zone of influence and any changes to this program are reviewed and adaptively managed through annual updates to the program. DDMI will consider collaborating with proponents of other projects in the Lac de Gras area to determine cause of death of caribou if an upward trend in mortality of caribou herds overlapping the Lac de Gras area is observed following commencement of the PKMW Project.

4. DDMI shares the NWTMN objective of having Lac de Gras water quality safe for aquatic life, fish and fish habitat in as short a period of time as possible. DDMI's assessment is that a two year monitoring period is required from the

time the pit lakes are filled with Lac de Gras water until they can be reconnected with Lac de Gras. This proposed two year period is planned regardless of whether processed kimberlite has been deposited. DDMI does not expect that depositing processed kimberlite will prolong the time until Lac de Gras can be safe for aquatic life, fish and fish habitat.

5. DDMI appreciates the concern noted by NWTMN. With respect, while we acknowledge mine operations have caused small changes in Lac de Gras, all monitoring (including TK monitoring) demonstrates the Lac de Gras is currently safe for aquatic life, fish and fish habitat. DDMI expects that with the completion of mining operations in 2025 and closure of the mine workings, that the operational water quality changes to Lac de Gras will reverse. With or without deposition of processed kimberlite Lac de Gras will continue to be safe for aquatic life, fish and fish habitat.

6. DDMI will undertake comprehensive monitoring programs a part of its regulatory closure requirements. DDMI is working with the Traditional Knowledge Panel to develop approaches to TK-based closure monitoring. DDMI expects the duration of post-closure monitoring to be guided by and adaptively respond to results obtained.

7. DDMI commits to continued engagement with NWTMN and FRMC to clarify aspects of the PK to mine workings project, provide updates on future regulatory submissions and consider recommendations NWTMN and FRMC may choose to provide during these engagements. Please see also commitment noted in the cover letter to this Intervener Response submission.

2. Fort Resolution Métis Council (FRMC) – Recommendations

Project-Specific and Cumulative Impacts on Caribou

1. Proponent to consider all of Diavik mine activities and closure plans within the assessment, as well as additional pressures on the Bathurst caribou herd including predation, fire, disease, and other impacts. In addition, DDMI to

adjust the baseline timeline to include the full decline of the Bathurst herd and reassess.

2. Should the Review Board determine that the EA will be allowed to complete without FRMC recommendation 1 being adopted, FRMC recommends that the Review Board find that there is already a pre-existing significant adverse cumulative effect on Bathurst caribou, and consider Project effects in light of this highly sensitive receiving environment, and make its decisions on whether the Project should be allowed to proceed and under what conditions accordingly.

3. As a condition of approval, the Proponent to engage FRMC in a funded caribou ITK study prior to closure, with the results of the study included in filings for relevant regulatory stages of approvals with the Wek'èezhlì Land and Water Board (WLWB) and/or the Wek'èezhlì Renewable Resources Board.

4. As a condition of approval, the Proponent to update the Wildlife Management and Monitoring Plan, including Indigenous Traditional Knowledge from all Indigenous groups that harvest in the area on ways to mitigate, monitor, and adaptively manage impacts from changes to Project closure to wildlife including caribou.

5. As a condition of approval, the Proponent to involve FRMC and other impacted indigenous groups in the development and implementation of a robust, community-based caribou-monitoring program specific to closure. The monitoring program should include, at minimum:

    a) Financial support;

    b) Training and employment of on-the-ground monitors from all impacted communities, including FRMC;

    c) Partnership with other governments, academics and communities;

    d) Reporting on the results of monitoring to governments, regulators, and indigenous groups that participated in the EA.

e) Multi-season and range level monitoring of the cumulative pressures on the Bathurst barren-ground caribou herd (e.g., predation, fire, and other impacts) that extends beyond the mine site.

The Indigenous monitoring program will include requirements for development of additional mitigations and offsetting measures for all stages of closure based on the observations of Indigenous monitors.

Caribou and Habitat Health

6. As a condition for approval, the Proponent to conduct Indigenous Traditional Knowledge (ITK) informed sampling of caribou forage and a funded FRMC caribou ITK study highlighting changes over-time observed by FRMC knowledge holders and identifying culturally appropriate recommended measures to reduce existing Project and Cumulative Effects to caribou health.

7. As a condition for approval, the Proponent to develop a community-based sampling program of caribou organ meat to track changes of caribou health overtime, and report results to the affected indigenous communities, Government of the Northwest Territories (GNWT), and as part of relevant regulatory filings with Wek'èezhii Land and Water Board (WLWB) and or the Wek'èezhii Renewable Resources Board.

Engagement of FRMC in Diavik's Assessment of the Project

8. Proponent to commit to or be required to, engage with the "non-signatory" parties like FRMC in a meaningful way during all subsequent regulatory phases of the Diavik closure process, and provide evidence to the WLWB of these efforts.

Inadequate Baseline Collected for Assessment of Impacts to FRMC Culture

9. As a condition for approval, the Proponent to engage all affected Indigenous groups in further ITK data collection to inform future closure planning, with evidence of these efforts and their outcomes reported to the permitting agency or agencies prior to those agencies making Project closure-related decisions. The Proponent will:

a) support the collection of Indigenous Traditional Knowledge related to traditional use, and compile it with information already acquired;

b) thoroughly consider any Indigenous Traditional Knowledge that is made available, and where applicable, incorporate Indigenous Traditional Knowledge into Project closure design, mitigations, monitoring and adaptive management; and,

c) do this in a culturally-appropriate way that respects applicable Indigenous Traditional Knowledge policies and protocols.

10. As a condition for approval, the Proponent to complete outstanding Indigenous Traditional Knowledge and land use and occupancy studies as part of closure planning.

11. Proponent to commit to engaging FRMC in any future ITK panel sessions.

Limited Impact Pathway's for Assessing Culture

12. As a condition for approval, Proponent will design, with input from affected Indigenous Groups, a follow-up program to verify the accuracy of impacts to culture. The follow-up program shall inform adaptive management and improve the effectiveness of the Proponent's mitigation of cultural impacts. As part of this follow-up program the Proponent will:

    a) engage with Indigenous groups that participated in the environmental assessment to identify cultural impacts, including cumulative impacts, from the Project;

    b) develop a framework with Indigenous groups for determining the acceptability of changes to perceived water quality and use;

    c) seek the input of those Indigenous groups on ways to strengthen the Proponent's cultural impact mitigation initiatives; and

    d) report annually to those Indigenous groups on the effectiveness of the Proponent's efforts to mitigate cultural impacts.

A detailed description of the Follow-up program to be included in filings for regulatory stages of approvals with the Wek'èezhii Land and Water Board (WLWB).

Inadequate Mitigations Proposed for Reducing Impacts to FRMC Culture

13. Proponent to commit to working with FRMC and other indigenous groups through workshops or other agreed to forums, to identify mitigation appropriate for preventing, reducing or compensating/offsetting harms to cultural use.

14. To provide assurances that any potential adverse impacts would not be significant, a thorough understanding of the state of the receiving environment, the chemical and physical nature of the Processed Kimberlite, the track record of the technology of lacustrine disposal of Processed Kimberlite in a major fish-bearing lake, and proof of agreed-to measures to accommodate potential loss of culture from worst-case scenarios must be required prior to any hydrologic connection between the pits and mine workings and Lac de Gras. The Board to incorporate the measures described in Table 1 into Conditions for the Project. In addition FRMC recommends that the WLWB sets closure objectives and criteria so that the Proponent ensures that the area will be suitable for traditional uses after a hydrologic connection is made.

Project-Specific and Cumulative Impacts on Culture

15. The Review Board to find that there is already a pre-existing significant adverse cumulative effect on culture, and consider Project effects in light of this highly sensitive receiving environment, and make its decisions on whether the Project should be allowed to proceed and under what conditions.

2.1 DDMI's Response to FRMC's Recommendations

1. DDMI has accepted the focused Environmental Assessment (EA) scope as defined by the MVEIRB and the rationale provided. DDMI does not agree with the FRMC that the scope of the assessment should be broadened to include all mine activities and closure plans as these have already been addressed through the original EA for the Project.

2. DDMI recognizes the importance of the Bathurst caribou herd to northern residents and indigenous communities as stated in Section 7.1.1.1 of the Summary Impact Statement. DDMI's assessment of potential Project effects on caribou including existing and proposed mitigation measures as well as a commitment to continue the on-going Wildlife Monitoring Program, demonstrates an understanding of the ecological and socio-cultural importance of caribou in the region.

   Overall, with the application of project design features as well as existing mitigation and monitoring, the PKMW Project is not expected to result in a measurable change in habitat, sensory disturbance, change in movement, or increased mortality risk for barren-ground caribou with ranges overlapping the Lac de Gras area.

3. DDMI appreciates FRMC interest in conducting a caribou ITK study but without knowledge of the intended study scope and relation to the deposition of processed kimberlite in mine workings, DDMI cannot commit to the requested funding.

4. Monitoring of caribou will be an important aspect of closure and post-closure monitoring at Diavik. As part of DDMI's closure planning, DDMI is hopeful that the Traditional Knowledge (TK) Panel will assist in developing the acceptance criteria for re-connection of the pit lakes to Lac de Gras and possibly implementing TK-based or community-based closure and post-closure monitoring programs that are of relevance to indigenous communities.

5. Monitoring of caribou will be an important aspect of closure and post-closure monitoring at Diavik. As part of DDMI's closure planning, DDMI is hopeful that the Traditional Knowledge Panel will assist in developing the acceptance criteria for re-connection of the pit lakes to Lac de Gras and possibly implementing TK-based or community-based closure and post-closure monitoring programs that are of relevance to indigenous communities. DDMI anticipates caribou monitoring will be holistic and consider interaction with the whole of the closure landscape rather than being focused on a specific facility like a pit lake containing processed kimberlite. These programs are expected to develop as closure planning advances. Monitoring results will be documented and distributed regularly for review. Monitoring programs will be

adapted based on results. All results will inform regulatory closure performance reporting requirements.

6. DDMI has included dust deposition and vegetation (lichen) monitoring through operations and this is intended to continue through closure and post-closure to verify changes over time. DDMI is hopeful that the Traditional Knowledge Panel will assist in developing complementary TK-based programs that are of relevance to indigenous communities. DDMI is not aware of a linkage between caribou forage and PK deposition in mine workings that would form the basis for this recommendation.

7. As part of DDMI's closure planning, DDMI is hopeful that the Traditional Knowledge Panel will assist in developing closure and post-closure monitoring programs that are of relevance to indigenous communities, including monitoring programs directly related to any pit lakes that have deposited processed kimberlite. To date, sampling of caribou organ meat has not been identified as a closure monitoring method generally and DDMI is unclear on the basis for considering this approach specifically for monitoring processed kimberlite to mine workings.

8. DDMI commits to continued engagement with FRMC to clarify aspects of the PK to mine workings project, provide updates on future regulatory submissions and consider recommendations FRMC may choose to provide during these engagements.

9. DDMI works with an existing Traditional Knowledge (TK) Panel that was developed as part of Diavik's Environmental Agreement. The TK Panel provides recommendations to DDMI for consideration in closure planning. As closure advances it is DDMI's expectation that the TK Panel will also become involved in the design and implementation of monitoring programs to assess the performance of closure designs. The TK Panel considers closure of all mine facilities and would include any pit lakes developed over deposited processed kimberlite. Evidence and outcomes are reported annually to the Wek'èezhìi Land and Water Board (WLWB). The TK Panel has accepted EMAB as an observer to the panel sessions. EMAB tracks recommendations made by the TK Panel to DDMI to ensure appropriate follow-up.

10. DDMI would be interested in understanding the proposed timing and scope of any ITK and land use occupancy study and how the results would relate specifically to Processed Kimberlite to Mine Workings.

11. Diavik's TK Panel was developed as part of the Environmental Agreement from the original Approval of the Diavik Diamond Mine Project. The TK Panel considers all aspects of Diavik's Closure Plan not just processed kimberlite to mine workings. Participation on the Panel has been determined based on recommendations from the Indigenous Parties to the Environmental Agreement and as such DDMI cannot commit to changing format or membership of the TK Panel. However DDMI has been advised by the TK Panel that they do not want their views or recommendations to be considered as necessarily being representative of the Parties who appointed them to the Panel. As such DDMI is intended to review the TK Panel reports and recommendations with the broader indigenous communities so that they can identify areas of alignment. DDMI can commit to annually reviewing TK Panel recommendations with FRMC.

12. DDMI appreciates the intent of this recommendation and supports the inclusion of a program to follow-up on the accuracy of impacts to culture as part of the closure and post-closure monitoring of any pit lakes where processed kimberlite has been deposited. However items a) through c) appear to be more appropriately addressed as part of this Environmental Assessment phase. DDMI understands that a key reasons for this Environmental Assessment are to a) identify cultural impacts, including cumulative impacts that may occur as a result of depositing processed kimberlite in mine workings; b) determine the acceptability of changes to perceived water quality; and c) identify effective mitigation measures. DDMI's understanding of a follow-up program would involve monitoring of changes to perceived water quality and use, comparing these with impacts identified during the EA and reporting results back to affected Indigenous groups.

13. DDMI commits to continued engagement with FRMC to clarify aspects of the PK to mine workings project, provide updates on future regulatory submissions and consider recommendations FRMC may choose to provide during these engagements including identification of mitigation to reduce harm to cultural use.

14. DDMI accepts that more could be done to engage with Fort Resolution Metis Council (FRMC) and DDMI commits to meeting with FRMC annually to:

    i. Provide updates on the PK to Mine Working Project specifically but also on closure planning generally;

    ii. Review recommendations made by the Traditional Knowledge (TK) Panel and DDMI's responses; and

    iii. Consider any recommendations from FRMC and provide written responses.

    In DDMI's view, the specific terms and conditions that will define the monitoring plans related to the PKMW Project should be established by the Wek'èezhìi Land and Water Board (WLWB) through the review of the Water Licence Amendment for the Processed Kimberlite to Mine Workings and the specific Environmental monitoring and management plans should be established through updates, reviews and approvals to Diavik's Closure and Reclamation Plan, AEMP Design Plan and related Environmental Management Plans.

    In DDMI's view, the already established and proven effective Traditional Knowledge (TK) Panel can continue to be utilized to monitor and report on the construction, operation, closure, and post-closure of the PKMW Project. DDMI intends to review the TK Panel reports and recommendations with the broader indigenous communities so that they can identify areas of alignment. DDMI can commit to annually reviewing TK Panel recommendations with FRMC.

15. DDMI concludes, based on its assessment of the PKMW Project as presented in the Summary Impact Statement (SIS), that with the application of mitigation measures described in the SIS and commitments made by DDMI in responses to Information Requests and Interventions, the effects of the PKMW Project on cultural use will not result in the long-term loss of availability of traditional resources for cultural use or access to traditional resources or areas, such that cultural use is critically reduced or eliminated within the regional assessment area. As a result, overall effects on cultural use are predicted to be not significant. DDMI notes both the Ekati and

Gahcho Kue Mines have regulatory approval to deposit kimberlite in mine workings. In the case of Ekati the Beartooth pit has already been filled with processed kimberlite (see May 9, 2019 DDMI response to MVEIRB#5) and Gahcho Kue have approved plans (MV2005C0032 and MV2005L2-0015) to deposit processed kimberlite into the mined out Hearn Pit before reconnection with Kennady Lake. Gahcho Kue 2018 Updated Project Description.

3. Tłı̨chǫ Government (TG) – Recommendations

Clay Hydrodynamics, Water Quality Modelling and Cumulative Impacts

1. The importance of Tłı̨chǫ engagement in the technical review: We encourage the Review Board to continue to ensure that Tłı̨chǫ knowledge holders are given priority in assessing impacts. The elders need to have full certainty that the predictions that are being made are correct. Our technical experts inform us of high uncertainty in predictions about how clays will settle – our elders need to follow the arguments that are made, and be assured that this certainty is attained in order to have any comfort with this proposal. Presently, there is a high degree of discomfort with the proposal.

2. Deep and continued engagement in Tłı̨chǫ elders to identify how this proposal will impact on cultural use. Tłı̨chǫ members feel that connecting Lac de Gras to the pits will alter the cultural and traditional use of, and relationship with, Lac de Gras and the surrounding area.

3. Summary of community concerns: After consulting with community members, we have found a list of key community concerns that should be considered in the hearings. These include: operational concerns - the structure and design security and the possibility of leaks, cracks or floods; cumulative effects - the cumulative impacts of the plans in the context of an already changing environment due to climate change; wildlife, habitat, and vegetation - the impacts of the project design on wildlife and vegetation; use of land - the ability for Tłı̨chǫ members to use the area; and monitoring and follow up –

concerns regarding the effectiveness of monitoring of the area and the pits over the long term.

4A. The Board retain an independent qualified expert on clay hydrodynamics to review the available relevant information provided by DDMI on FPK and to prepare a report to the Board as to adequacy of DDMI's work to date in relation to the treatment of EFPK in its planning to date.

4B. Ideally to follow or be integrated with #1, the Board conduct or commission an independent expert review of DDMI's WQ modelling and results in order to obtain a more informed understanding of the likely outcome of the project in terms of environmental risks.

4C. Include an assessment of cumulative impacts to Lac de Gras as a component of the environmental review conducted by the Board.

3.1 DDMI's Response to TG's Recommendations

1. DDMI appreciates the assessments provided by the Tłı̨chǫ. In Appendix A DDMI has provided some pictures and a link to a short video that show how clay will settle. We hope these visual assessments of clay settling are helpful in the same way that the jar samples appeared to help at our previous meetings with the Tłı̨chǫ.

2. DDMI commits to continuing to engage with the Tłı̨chǫ elders to understand and identify approaches to assess and mitigate potential impacts on cultural use. DDMI has committed to immediately proceed with the development of a TK-based approach to assessing pit lake conditions with respect to impacts on cultural use and will be seeking direct involvement from the TK Panel and EMAB. Tłı̨chǫ are actively involved in both.

3. DDMI appreciates bringing these concerns forward for consideration at the hearings. We believe we have provided our views on each of these issues and will be pleased to respond to any further questions during the community and technical hearings.

4A. We understand that the expert reviewer who advised on this recommendation may have only recently become involved in this Environmental Assessment and was not involved in the preceding Technical Sessions with the WLWB. It would be useful for the reviewer to review the

available information on the material properties and also the testing being conducted by the University of Alberta to get a greater insight into the proposed PK to mine workings project material properties.

In Appendix A, DDMI provides as evidence images of the initial 24-hour settling and 2 month consolidation testing conducted on both the Fine Processed Kimberlite (FPK) and the Extra Fine Processed Kimberlite (EFPK). It is the FPK that is the primary material proposed to be deposited in mine workings. EFPK deposition has been advanced as a possible option that if feasible could provide closure options for the PKC. The images in Appendix A show visually what DDMI has been demonstrating to reviewers with jar samples, that both EFPK and FPK settle rapidly and produce a very clear decant water over a defined PK layer. After the initial settling/clarification the two PK materials then continue to consolidate and release pore water. The consolidation rates are markedly different between FPK and EFPK with the EFPK consolidating much more slowly. It is the slow consolidating EFPK that has been identified as a closure issue for the PKC. The consolidation rate of the FPK in particular determines the pore water release rate which is a key driver of both decant and final pit lake water quality. The full results from this University of Alberta testing will be used to determine model input to revised water quality modelling to be completed as a condition of an amended Water License.

4B. DDMI accepts this recommendation but proposes that the Independent Review be conducted on the updated modelling that DDMI has committed to submitting to the WLWB for approval as part of the Processed Kimberlite Containment in Mine Working Design Report prior to depositing PK in mine workings. The independent review could be similar in concept to the independent reviews required for key engineered structures. Please see also a summary of key commitments in the cover letter to this Intervention Response.

4C. Diavik has completed the required assessment of cumulative impacts to Lac de Gras that includes the combined contributions from a fully developed Ekati Mine (including the Jay Development) and Diavik as the background water quality for modelling pit lake conditions with deposited processed kimberlite. These results are included in the Summary Impact Statement.

RioTinto

4. Government of the Northwest Territories (GNWT) – Recommendations

Water Quality

1. The GNWT is of the opinion that if the deposit of PK into pits results in poor water quality which results in the avoidance of the area or results in traditional users no longer using the area for traditional purposes, the contingency mitigation option should include raising the PKC Facility such that it can store the remaining PK produced from the site. DDMI should commit to continue refining and updating modeling to confirm that the deposition of PK to mine workings would not result in unacceptable conditions in the pits or Lac de Gras, prior to placing PK into the pits.

2. The GNWT is unable to assess the significance of changes to the water quality as a result of cumulative effects from the Jay Project and the Diavik Mine at this time. Should updated modeling predict water quality conditions in the pit lakes or within Lac de Gras, in the vicinity of the mine, are of such poor quality that traditional users could either avoid the area or no longer use the area for traditional purposes, the placement of PK into the pits and underground mine workings should not be approved.

3. Due to DDMI not providing information requested by the GNWT, the GNWT is unable to assess the significance of increased TDS loads on Lac de Gras as a result of placing PK into the open pits. The GNWT will request information on TDS loads in the water licencing process to ensure agreed to water quality thresholds or benchmarks are achieved in Lac de Gras.

4. The GNWT recommends that if the placement of PK into A21 is required to maintain operational flexibility, that a cover or barrier be placed over the PK to prevent the mixing with water that could result in poor water quality at closure.

Social Well-being

5. The GNWT recommends the Review Board require DDMI to publicly provide an updated framework for community engagement and participation in

closure planning and the closure phase should PK be deposited in the pits. This framework and plans created from this framework should be developed collaboratively with all potentially affected IGOs and clearly identify how DDMI will actively work with communities to ensure that community concerns regarding adverse effects to the safety, qualities, and health of Lac de Gras are addressed. The updated framework could also be used by DDMI as engagement required during the regulatory phase.

6. As IGOs have indicated a preference for visual monitoring of the Project, include potentially affected IGOs in the visual monitoring of the all phases of the Project and publicly report on these monitoring activities to ensure that potentially affected Indigenous communities are well-informed and aware of Project design, activities, and potential effects for the life of mine.

4.1 DDMI's Response to GNWT's Recommendations

1. DDMI generally agrees with GNWT that if PK deposition is expected to cause a change in water quality such that traditional users could no longer use the area for traditional purposes or would avoid the area then PK should not be deposited in mine workings but continue to be deposited in the Processed Kimberlite Containment Facility (PKC). However, as noted by GNWT it is imperative that there is sufficient evidence that the water quality will in fact be poor and that the cause is the deposition of PK. It is DDMI's view that PK deposition in mine workings would not cause poor water quality. DDMI has committed to continue refining and updating the modelling to confirm this prior to placing PK into the pits. Please see also a summary of key commitment in the cover letter to this Intervention Response.

2. DDMI met with the GNWT to better understand why they were unable to consider cumulative effects. We believe these discussion clarified how cumulative effects were assessed such that the GNWT can better assess the significance of changes to water quality.

   DDMI generally agrees with GNWT that if PK deposition is expected to cause a change in water quality such that traditional users could no longer use the area for traditional purposes or would avoid the area then PK should not be deposited in mine workings. However as noted by GNWT it is imperative that there is sufficient evidence that the water quality will in fact be poor and that

the cause is the deposition of PK. It is DDMI's view that PK deposition in mine workings would not cause poor water quality.

Finally, DDMI's consultant (Stantec Inc.) for the preparation of the Summary Impact Statement (SIS) notes that the cumulative effects methods and the general environmental assessment approach in the SIS aligns with that in DDMI's 1998 Comprehensive Study for the original Diavik Mine Project and that these methods do not fundamentally deviate from approaches currently used in environmental assessments under the Canadian Environmental Assessment Act, 2012 (CEAA 2012), Nunavut Planning and Project Assessment Act, MVRMA and Inuvialuit Final Agreement.

3. The PKMW Project will result in no change to the production of kimberlite ore. The volume of PK pore water and related process water (and therefore total dissolved solids [TDS] load) is directly related to ore production and PK discharge from the Process Plant. Changing the disposal location from the PKC to the Mine Working will not change the amount of PK pore water or process water managed or the TDS load in water related to ore production.

   In a typical year, 300,000 kg of TDS is directed to the North Inlet Water Treatment Plant (NIWTP) via the PKC. This TDS load is equivalent to about 10% of the total annual TDS load from the NIWTP to Lac de Gras (LDG). Averaged out during the Operations phase of the PKMW project this load will remain at the same rate with a new source of the Mine Working (rather than the PKC). TDS loads from the NIWTP to LDG have been assessed at a rate as high as 7,900,000 kg/year (Golder 2015 Jay Project Compendium of Supplemental Water Quality Modelling). At this rate, TDS loads associated with the PKMW project, or current PKC Operations, would represent <5% of the total TDS load to LDG. Additionally, this TDS load is unchanged by the PKMW project because it relates to ore production and not the ore disposal location. Given this information it is unclear why GNWT has concerns that TDS loads could have potentially significant impacts on the receiving environment since this component represents a small proportion of the site TDS loading balance. To provide the post-closure context, predicted total annual TDS loads from all post-closure site runoff to Lac de Gras is predicted to be 1,880,004 kg/year and post-closure predicted total average annual TDS loads from the pit lakes to LDG (through the breaches) over the 100 year

simulation are 1,814 kg/year (A418 Scenario 2a) and 5,951 kg/year (A418 Scenario 3a) or <1% of the site load.

DDMI's reiterates that discharges (TDS loads) to the North Inlet through sequencing of PK water reporting to North Inlet initially from the Processed Kimberlite Containment Facility source transitioning to the Mine Workings with Processed Kimberlite source will not have a significant net effect on total TDS loads to the North Inlet. In the unlikely worst case scenario where for a short period of time (months) TDS loads are directed to the North Inlet from both the PKC and PKMW, this would still only constitute a short term 10% increase to the net TDS load to the North Inlet. Consequently, TDS loads to LDG are not expected to change significantly as a result of the PKMW project during Operations, and will constitute a minor increase to the overall TDS load to LDG post-closure (<1%). DDMI can split TDS loading out with monthly resolution during the Operations phase as a part of the revised design modelling that will be completed as part of the Processed Kimberlite Containment in Mine Working Design Report in H1 2021. This Design would coincide with the submission of an updated Water Management Plan & Water Balance for the mine site based on the specific final deposition sequence for the PKMW project.

4. DDMI accepts Interveners request to remove the A21 mine workings from further consideration for PK deposition (please see cover letter to this Intervention Response).

5. Please see the proposed framework for the development of TK-based approach and criteria for assessing pit lake conditions for reconnection. It is DDMI's intention to implement this plan immediately and if successful anticipates it could be applied to other similar aspects of closure. Active involvement from five Indigenous Party representatives on EMAB are expected to be a key to the success of this proposed approach. DDMI is hoping the GNWT, as an EMAB Board member will support this approach (please see cover letter to this Intervention Response).

6. With respect to the scope of this PK to mine workings DDMI is committed to immediately working with the TK Panel, EMAB and Indigenous Groups to develop TK-based criteria for assessing pit lake conditions and establishing acceptance criteria for any reconnection of pit lakes with Lac de Gras. As a

signatory to the Environmental Agreement DDMI will be seeking the GNWT support to advance EMAB's involvement in this undertaking (please see cover letter to this Intervention Response).

5. Yellowknives Dene First Nation (YKDFN) – Recommendations

Water Quality Modelling

1. The water modeling predictions need to be optimized as incorrect prediction can have catastrophic adverse effects on the environment and all other VCs. To ensure this, YKDFN recommend the modeling is streamlined, with better informed, more robust (e.g. suspended particles modeling) and updated data as it may become available and that said modelling be executed throughout the project lifetime prior to and post deposition into mine pit and externally reviewed by hydrological specialists.

2. Mining companies must involve Weledeh Yellowknives Dene in the monitoring impacts from mining on water quality, water flow, water level, fish, aquatic plants, and wildlife relying on water. (Yellowknives Dene, 1997).

3. Mining companies and government specialists must continue to verify where water flows from Ek'ati. Monitoring of water flow and levels must be continual throughout and after mining operations.

4. Mining companies must involve Weledeh Yellowknives Dene in the monitoring water quality, water flow, water level, fish, aquatic plants, and wildlife relying on water.

Exclusion of A21

5. We are of the opinion that Pit A21 should not be considered by the board as a viable option for PK deposition in any of the developers highlighted Scenarios.

Fish and Aquatic Life

6. The proponent should be providing hydrologic studies and modeling of potential effects on littoral fish habitat to recommend maximum withdrawal rates that maintain water levels in Lac de Gras and the Coppermine River to prevent ice scour and impacts to fish and fish habitat, along with the estimated time to fill the pit lakes at these withdrawal rates.

   Downstream effects in Coppermine River as a result of changes in flow do not seem to be adequately addressed. YKDFN therefore recommend that before the dams are breached that quantitative habitat assessment and sensitivity analysis are executed by the developer.

   Government specialists and an independent environmental monitoring agency picked by the Yellowknives Dene and the company should verify environmental information for reports and monitoring of mining effects. Contractors working for mining companies in these areas must have at least ten years of field experience most of it in northern environments, and field staff working for such contractors must have at least two years of experience collecting field data. Contract scientists or fisheries and aquatic specialist researchers will hire Yellowknives Dene landowners for fish monitoring and related work. (Yellowknives Dene, 1997).

Reconnection to Lac de Gras

7. YKDFN would tend toward the idea of leaving the lake isolated so that is forms its own self containing lake so long as monitoring procedures and protocol are developed to include indigenous community and the development of contingency plans in the event of a dam structure breach.

   And in the event, it is chosen to be reconnect, we would be in favor of the establishment or assessment of traditional or indigenous knowledge as considered criteria rather than the heavy western science orientation which currently seems to be the focus of the EA.

Closure Objectives and Monitoring

8. YKDFN recommended that in the event of a positive decision in favor of going ahead with the deposition, that closure objectives be collaboratively developed among the indigenous groups and the developer. Notwithstanding the existence and of the current Diavik TK panel, we believe the extent of the collaborative effort should go beyond those confines and developing key performance indicators with the location indigenous community.

   It is also important for the developer to ensures that youth are engaged in the monitoring of all stages of the mine, as they will be the monitors in times to come and will undoubtedly pass the baton onto other generations, this is essential for monitoring the long term effects of the mine activities.

5.1 DDMI's Response to YKDFN's Recommendations

1. DDMI generally accepts this recommendation as explained in the cover letter to this Intervention Response.

2. DDMI continues to work with the TK Panel to identify opportunities and approaches to TK-based monitoring particularly for application to post-closure.

3. DDMI will continue to consider the impacts from Ek'ati on the PKMW Project during both the Operations and Closure phases. To reduce the potential for cumulative effects, withdrawal rates for the PKMW Project will be selected that are protective of the aquatic environment, and consider other operations within the Lac de Gras watershed. In DDMI's view, these rates should be established in discussion with regulators through the Wek'èezhìi Land and Water Board (WLWB) process updates/approvals to Diavik's Closure and Reclamation Plan.

4. DDMI continues to work with the TK Panel to identify opportunities and approaches to TK-based monitoring particularly for application to post-closure.

5. DDMI accepts Interveners request to remove the A21 mine workings from further consideration for PK deposition (please see cover letter to this Intervention Response).

6. Infilling of mine workings (with or without PK deposition) with freshwater has the potential to result in adverse effects to volume and outflow of Lac de Gras. Assuming freshwater withdrawal rates for the PKMW Project are consistent with those of the ICRP, infill of the mine workings under the PKMW Project will take less time, and will require less water than in scenarios where no PK is deposited in mine workings. Therefore, PK deposition will have effects on the volume and outflow of Lac de Gras of lesser magnitude and shorter duration than those associated with the current ICRP. To reduce the potential for cumulative effects, withdrawal rates for the PKMW Project that are protective of the aquatic environment, and consider other operations within the Lac de Gras watershed. In DDMI's view, these rates should be established in discussion with regulators through the Wek'èezhìi Land and Water Board (WLWB) process updates/approvals to Diavik's Closure and Reclamation Plan.

7. DDMI agrees with the recommendation to develop TK-based criteria for assessing pit lake water quality that can be considered in addition to comparisons of measured water quality with AEMP benchmarks in any consideration of reconnecting fish from Lac de Gras with the pit lake (please see cover letter to this Intervention Response).

8. DDMI agrees with the recommendation to develop TK-based criteria for assessing pit lake water quality that can be considered in addition to comparisons of measured water quality with AEMP benchmarks in any consideration of reconnecting fish from Lac de Gras with the pit lake. In addition to the TK Panel, DDMI proposes to ask that EMAB facilitate the revision/support of the recommended TK-based criteria with five Indigenous Parties represented on EMAB (please see cover letter to this Intervention Response).

6. Environment and Climate Change Canada (ECCC) – Recommendations

The Use of A21 Pit for the Deposition of Processed Kimberlite

1. ECCC recommends that DDMI not use A21 pit for PK deposition since it displays the highest potential for environmental risk, and lowest capacity for storage.

6.1 DDMI's Response to ECCC's Recommendations

1. DDMI accepts Interveners request to remove the A21 mine workings from further consideration for PK deposition (please see cover letter to this Intervention Response).

7. Fisheries and Oceans Canada (DFO) – Recommendations

Offsetting Habitat Losses

1. DFO recommends that Diavik continue to work with DFO-FFHPP to amend the existing authorization to reflect the proposed changes to the mine, and update their offsetting accordingly to ensure that any outstanding impacts to fish habitat are adequately offset.

7.1 DDMI's Response to DFO's Recommendations

1. DDMI appreciates DFO's openness to considering alternative off-setting approaches. As stated in the cover letter to this Intervener Response submission DDMI commits to considering alternative off setting plans that are reasonable, practical and provide fisheries benefits to Indigenous Communities. DDMI will advance alternative off-setting plans by February 1, 2020 if: a) there is a high likelihood that predicted pit-lake water quality conditions will not meet TK-based pit-lake criteria for reconnection; or b) 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 c) the MVEIRB

determines that DDMI should not breach the dike and allow access to the pit-lake.

8. Lutsel K'e Dene First Nation (LKDFN) – Recommendations

Cultural Uses

1. Meaningful integration of Traditional Knowledge into environmental management plans and programs, including but not limited to the interim and final closure and reclamation plans, aquatic effects monitoring plan, and wildlife monitoring program. There must be goals, objectives, criteria, indicators, benchmarks, and/or parameters based on Traditional Knowledge in these and others plans and/or programs.

2. Within one year of the approval of the proposed project, establish an environmental monitoring program that uses Traditional Knowledge to monitor the construction, operation, closure, and post-closure of the proposed project. DDMI is responsible for funding for at least two full-time Traditional Knowledge Monitors and one full-time Program Coordinator, program infrastructure and equipment, and program development, delivery, and reporting. The purpose of the environmental monitoring program is to observe and document ecological, social, and cultural change, and make recommendations to DDMI regarding the proposed project.

Caribou and Other Wildlife

3. To help prevent a significant adverse impact on caribou and other wildlife that may be exposed to contaminated water in pit lake(s), DDMI shall create a physical barrier around the pit lake(s) containing processed kimberlite so that caribou and other wildlife cannot access the pit lake(s) during infilling and dike breaching. If pit lake(s) are not reconnected to Lac de Gras, a permanent barrier should be constructed around the pit lakes to deter caribou and other wildlife from accessing the pit lake(s) containing processed kimberlite.

DDMI shall work collaboratively with the Indigenous governments and organization and TK Panel experts to identify the most appropriate barrier to isolate the pit lake(s) during infilling, and, possibly, breaching of the dikes.

4. Any caribou or other wildlife carcasses found in the zone of influence should be tested, in partnership with GNWT ENR, to assess the cause of death and overall health of the animal. DDMI shall notify Indigenous governments and organizations within 24 hours of the any deceased wildlife found within the zone of influence. Test results and analysis are to be shared with affected Indigenous governments and organizations Lands Departments in a timely manner.

5. Update the wildlife monitoring plan, before the transportation of processed kimberlite to pit lake(s) begins, to include methods to deter/remove caribou and other wildlife from access the pit lake(s) containing processed kimberlite during operation, closure, and post-closure phases.

Fish and Fish Habitat

6. To minimize significant adverse ecological and cultural impacts associated with fish and fish habitat, DDMI shall integrate goals, objectives, indicators, and benchmarks based on Traditional Knowledge in the aquatic effects monitoring plan, interim/final closure and remediation plans, and any other plans or programs, if appropriate.

7. To minimize significant adverse ecological and cultural impacts on fish and fish habitat, the maximum rate of water withdrawal and time periods shall does not inhibit fish passage and littoral habitat at the Narrows. Refilling pit lakes shall not result in greater than 1% or less loss of fish and fish habitat.

Water Quality

8. To prevent significant adverse impacts to water quality in Lac de Gras, DDMI shall not deposit and store processed kimberlite in pit lake A21.

9. To prevent significant adverse impacts to water quality in Lac de Gras through the application of the precautionary principle, any pit lake(s) containing processed kimberlite will not be reconnected to Lac de Gras.

10. To reduce significant adverse impact to water quality in Lac de Gras, DDMI shall monitor water quality in the pit lakes at least once a year for at least 100 years to help ensure that meromixis is established and maintained. AEMP benchmarks should be based on pre-mining, baseline conditions in Lac de Gras or the most stringent water quality guidelines for drinking water and fish and fish habitat in Canada.

11. To prevent significant adverse impacts on water quality in Lac de Gras and increase the probability of maintaining stratification in pit lake(s) in the very long-term, at minimum a 100 m freshwater cap depth overlying processed kimberlite in mined out pit(s) is required.

8.1 DDMI's Response to LKDFN's Recommendations

1. With respect to the scope of this PK to mine workings DDMI is committed to immediately working with the TK Panel, EMAB and Indigenous Groups to develop TK-based criteria for assessing pit lake conditions and establishing acceptance criteria for any reconnection of pit lakes with Lac de Gras (please see cover letter to this Intervener Response submission).

2. DDMI suggests that the already established and proven effective Traditional Knowledge (TK) Panel be utilized to monitor and report on the construction, operation, closure, and post-closure of the PKMW project. The TK Panel has sessions at the Diavik site annually which would provide the ability monitor each phase of the project. DDMI does not judge that the level of effort to monitor the narrow scope of this project justifies at least two full-time Monitors, one full-time Program Coordinator, program infrastructure and equipment, and program development, delivery, and reporting.

3. Based on Diavik's experience to date with wildlife use and deterrence during operation, we expect that current deterrence methods would be more appropriate for this limited (6 month to 1 year) time period rather than constructing a physical barrier like a fence. With regard to caribou we believe this can be done with a minimum of additional stress. DDMI is willing to work with the TK Panel and Indigenous Groups to improve deterrence methods.

4. DDMI's assessment of potential Project effects on caribou including existing and proposed mitigation measures as well as a commitment to continue the on-going Wildlife Monitoring Program, demonstrates an understanding of the

ecological and socio-cultural importance of caribou in the region. Given that this assessment has demonstrated the PKMW project will have no significant effects to wildlife, including caribou, it is unclear why DDMI should assess the cause of death and overall health of any animals found deceased within the zone of influence of the mine. In DDMI's view, the current Annual Diavik Wildlife Monitoring Program and Report adequately addresses monitoring requirements for wildlife within the zone of influence and any changes to this program are reviewed and adaptively managed through annual updates to the program. DDMI will consider collaborating with proponents of other projects in the Lac de Gras area to determine cause of death of caribou if an upward trend in mortality of caribou herds overlapping the Lac de Gras area is observed following commencement of the PKMW Project.

5. DDMI will continue to implement its existing Standard Operating Procedures (SOPs) for the management of wildlife at site. To minimize wildlife interactions with the mine workings/pits during construction and operations:

    i. Monitoring/tracking of wildlife presence and/or proximity to the mine workings.

    ii. Training all site personnel to record and/or report incidental sittings of wildlife, including birds, in the general area of the mine workings during operations.

    iii. Employing deterrents such as herding as required.

    iv. Excavating ramps into the pit walls that will remain as a shoreline.

    v. Use of wildlife deterrence techniques such as truck horns, bear bangers, 12Ga cracker shells, 12Ga bean bags, scarecrows, decoy foxes and falcons, noise makers (Wetland Wailer Mk IV), and hanging screens down the high walls of the pits.

    In DDMI's view, the current Standard Operating Procedures (SOPs) adequately mitigate the risks to wildlife and any changes to this work should be reviewed and adaptively managed through annual updates to the Diavik Wildlife Monitoring Program and Report.

6. DDMI agrees with the recommendation to develop TK-based criteria for assessing pit lake water quality that can be considered in addition to comparisons of measured water quality with AEMP benchmarks in any consideration of reconnecting fish from Lac de Gras with the pit lake (please see cover letter to this Intervention Response).

7. Water withdrawal rates that are protective of the aquatic environment, including fish and fish habitat, will be developed in discussion with regulators. In DDMI's view, the final withdrawal rate should be established by the Wek'èezhìi Land and Water Board (WLWB) through updates, reviews and approvals to Diavik's Closure and Reclamation Plan.

8. DDMI accepts Interveners request to remove the A21 mine workings from further consideration for PK deposition (please see cover letter to this Intervention Response).

9. With respect, at a minimum there would have to be a planned hydrologic connection between the pit lake and Lac de Gras (LDG) otherwise water from precipitation and local runoff will overtop the dike structure in an uncontrolled manner. It is DDMI's view based on the water quality modelling to date that the better water quality condition in Lac de Gras will result from a good hydrologic connection between the pit lake and Lac de Gras (Please see response to MVEIRB Supplemental IR#5). Maintaining a physical barrier that prevents fish from accessing the pit area could on the other hand could be an effective mitigation if Lac de Gras fish health was the primary concern. To ensure there are no significant adverse impacts to water quality when reconnecting the pit lake(s) to LDG, Diavik has committed to: 1. providing updated modelling results based on as-built conditions with updated assumptions and calibration of model inputs, and 2. working toward the development of acceptance criteria for re-connection that are TK-based.

10. In DDMI's view, the specific terms and conditions that will define the monitoring plans related to pit lake water quality should be established by the Wek'èezhìi Land and Water Board (WLWB) through the review of the Water Licence Amendment for the Processed Kimberlite to Mine Workings and the specific monitoring plans (including duration) should be established through updates, reviews and approvals to Diavik's Closure and Reclamation Plan and Aquatic Effects Monitoring Program (AEMP) Design Plan. Current pit

lake water quality modelling results suggest surface water concentrations will peak at the time of pit infilling, therefore at this time DDMI does not consider there is a scientific basis for water quality monitoring to continue for at least 100 years. DDMI also emphasizes that the development and maintenance of meromixis or a chemocline is not required for the protection of aquatic life, rather water quality in the top 40 m of the water column should remain below AEMP Benchmarks.

11. DDMI will further evaluate the need for a deeper water cover when the updated water quality modelling is completed as a condition of an amended Water License.

9. Environmental Monitoring Advisory Board (EMAB) – Recommendations

The Review Process

1. The MVEIRB carefully consider whether DDMI has provided sufficient information about its proposal, in a sufficiently understandable form, that Parties to the review are able to understand the potential adverse impacts and proposed mitigations, and provide informed comments and recommendations about it.

2. The MVEIRB, and the WLWB, evaluate the information provided by the proponent in this assessment, and the form it has been provided, and determine whether there are lessons to be learned for future assessments in terms of information management.

Participant Funding

3. That MVEIRB recommend that permanent, adequately resourced, participant funding programs be established to allow Affected Communities and other organizations to fully participate in environmental assessment and water licence proceedings.

Definition of Significance

4. DDMI should update their proposed definitions and thresholds for significance to reflect the current conditions and context for the Environmental Assessment. The updated definitions and thresholds should be supported by rationale that includes information about how the perspectives and values of people who will be affected most have been considered.

5. When conducting its assessment, the MVEIRB should give careful consideration to the definitions and thresholds for significance. It should rely on definitions and thresholds that reflect the current conditions and context for the environmental assessment and incorporate the perspectives and values of the people who will be most affected.

6. The Review Board should clarify how it would expect the definitions of significance in the environmental assessment to be operationalized during the regulatory phase, and whether a finding that an impact is not significant during an environmental impact assessment has any effect on the application of benchmarks, standards, guidelines etc. by regulators.

Reliability of Predictions

7. In conducting its assessment of potential effects on water quality, the MVEIRB should acknowledge the preliminary nature of the current modelling. To address the uncertainty about model results, the MVEIRB should require completion of more detailed, site-specific modelling to confirm the accuracy of predictions. This refined modelling should be provided for review/approval prior to final approvals and deposition of PK into pits.

    a) DDMI should be required to re-run the water quality model once U of A results are available.

    b) DDMI should also be required to re-run the model once it can be calibrated using information specific to the pit lake, i.e. before breaching the dike.

c) MVEIRB should engage an independent 3rd party expert to review the water quality model and results.

8. Should the predictions change significantly after additional data becomes available DDMI should be required to re-assess the potential for significant adverse environmental impacts from the project.

Assessment of Effects on Water Quality

9. When developing definitions and thresholds for significance for water quality, the MVEIRB should consider the magnitude of change from baseline conditions. For water quality, negligible magnitude should be consistent with changes from baseline that are not detectable with a reasonable monitoring program. Changes that are within use-protection guidelines or benchmarks may be appropriate for defining other categories of magnitude.

Benchmarks for Unanticipated Mixing Scenarios

10. Ecological thresholds for water quality should not be higher, or lower as appropriate, than those established for the protection of aquatic life.

Inclusion of A21

11. The A21 pit should not be considered for PK disposal.

12. If MVEIRB decides to allow A21 for PK disposal, they should include pit-specific limits on the amount of PK allowed for disposal, increase the size of the water cap, and direct DDMI to conduct separate sensitivity analyses.

Decision to Reconnect to Lac de Gras

13. Water and sediment quality in the pit lake should be monitored comprehensively throughout the pit lake and over a sufficient time period to identify trends to ensure conditions are protective of aquatic ecosystem health prior to reconnecting with Lac de Gras (LDG).

14. MVEIRB should recognize sediment quality as an important indicator for the fish and fish habitat VC, and require DDMI to define appropriate sediment

quality criteria that it will apply before reconnecting pit lakes with LDG. These criteria should be developed to support licensing for the PK to Mine Workings (PKMW) Project and should be protective of the aquatic ecosystem. The application of the criteria should be limited to areas that may affect fish, i.e., where fish are likely to be present.

15. To address potential effects on public safety, MVEIRB should require establishment of criteria for defining acceptable pit wall stability (e.g., return periods, factors of safety, etc.) before reconnection of pit lakes with LDG. These criteria should be developed to support licensing for the PKMW Project. They should be consistent with the expected post-closure land use, specifically increased recreational and subsistence use of the pit lake areas.

16. To recognize the value of Traditional Knowledge in making the decision to reconnect the pit lake with LDG, MVEIRB should require establishment of Traditional Knowledge criteria to consider in the decision.

Effects to Fish and Fish Habitat

17. It is recommended that monitoring of fish use of the pelagic zone of the pit lake be required, at least initially after breaching the dikes, to confirm that fish are only using the upper 40 m portion of the water column. Methods could include non-lethal techniques such as acoustic monitoring, trap nets, minnow traps, and fish tagging.

18. Monitoring of fish use of the enhanced habitats required by the Fisheries Authorizations should also be required.

19. DDMI should also address the predicted effects on DO in the other two pit lakes using a mass-balance model, notably for pit A21 which is characterized by a notably different shape, volume, and depth, and a shallower water cap.

20. A dissolved oxygen survey should also be completed at additional sites, including shallow sites over substrate, to confirm the predictions that dissolved oxygen concentrations will be high above the chemocline in all seasons.

21. Monitoring the top 40m of the water column before breaching should be considered a minimum, given that the actual depth of the mixolimnion is not known. The depth of the mixolimnion should be confirmed before breaching the dikes to confirm to which depth the water quality is safe for aquatic life.

22. It is recommended that a metals (including mercury) in fish tissue survey be undertaken on large bodied fish that are harvested in the study area (e.g. lake trout), following breaching of the dikes. The survey would measure metal concentrations in the tissues that are consumed. It is further recommended that DDMI fund a study to collate and inventory all years of LDG lake trout tissue data it has collected, review the data set and conduct appropriate analyses to determine levels of metals in lake trout over time, compare these to existing guidelines and make recommendations for possible future studies of metals in lake trout.

23. Prior to breaching of the dikes, sampling of biota (fish and benthic invertebrates) that may have been introduced when water from LDG was pumped in to form the closure cap should be conducted. These biota would have been exposed to higher concentrations of contaminants in water prior to the formation of a stable chemocline. If significant numbers of organisms are present, the need to assess them for concentrations of metals and mercury to avoid potential risk to fish that will be introduced after breaching of the dikes should be considered.

Effects to Wildlife

24. When conducting the environmental assessment, MVEIRB should acknowledge the potential for the PK disposal to affect wildlife habitat and health during the operational period, and consider these effects in the assessment. To mitigate potential effects, MVEIRB should require development/refinement of management plans to incorporate specific requirements for wildlife monitoring and response protocol related to waterfowl and wildlife use of pits during the operational period.

Monitoring (Pre and Post Dike Breach)

25. DDMI should develop a comprehensive water and sediment quality monitoring program to confirm the model predictions and the suitability of

water quality for reconnection with LDG. The program should aim to understand spatial (in three dimensions) and temporal variability of water quality conditions to support validation of modelling and decision-making about pit lake reconnection. Pit lake reconnection should only occur once monitoring confirms that water quality is suitable in all relevant locations in the pit, and through all seasons (suggest late winter, after spring turnover, late summer and after fall turnover). Monitoring should be conducted to support decision-making about reconnection and continue after reconnection to confirm continuation of suitable conditions.

26. DDMI should develop a sampling plan to verify model calibration, inputs and assumptions. This should include sampling the supernatant water above the PK, porewater quality of the PK placed into the pit, groundwater (as possible) and LDG temperatures.

Prior to Breaching Dike:

27. Initial sampling should extend throughout the water column, to determine when meromixis is established and monitor development of a chemocline. Sampling frequency should be based on the anticipated rate of gradient formation. Initial conditions should be recorded for the suite of AEMP parameters.

28. When water quality at the sampling location in the centre of the pit lake is considered suitable for breaching of the dikes, an expanded water quality sampling program should be conducted to address potential spatial and temporal variability. It is recommended that sampling be conducted for two years to ensure that there are not seasonal or interannual variations in conditions that result in adverse effects to water quality in the pit lakes above the chemocline.

29. Prior to considering breaching of the dikes, water quality should be sampled at additional stations for a two year period to determine whether there is marked spatial variation in water quality between the open pelagic area of the lake and shallow areas, in particular where fish habitat has been constructed.

30. The criteria for breaching of the dikes should consider sampling over the two years, in different areas of the lake. If there is marked temporal or spatial heterogeneity, then the criteria should be adjusted accordingly.

31. The monitoring program should include monitoring of sediment quality in areas that may be accessible to fish once the pit lakes are reconnected to LDG.

32. The monitoring program should be adaptive.

After Breaching Dike:

33. Monitoring of the pit lake for the first year(s) after breaching of the dikes should confirm that the meromictic gradient remains stable.

34. Sampling in the pit lake should include vertical profiles of pH, dissolved oxygen, temperature and conductivity above and immediately below the chemocline. Sampling should be conducted in late winter, after the spring turnover, in late summer and after the fall turnover. Parameters sampled for laboratory analysis should include those monitored in the AEMP, and comparisons would be to both the AEMP benchmarks and water quality in LDG.

35. Initial monitoring after breaching of the dikes should include various locations in the pit lake, including at the dike breaches, to determine which areas are more affected by direct water exchange with LDG and which are more affected by water quality within the pit lake. If spatial heterogeneity is observed then the locations of sample collection should be adjusted.

36. The frequency of water quality sampling in the pit lake can be reduced if conditions are observed to be stable. An assessment of the risk of an unanticipated mixing event would need to be completed to determine what frequency of sampling is required to support implementation of the contingency plan (i.e., closing the breaches in the dike). Monitoring data available at the time will assist in informing this assessment.

37. If water quality in the pit lakes is markedly different from that in LDG, then initial sampling of conductivity, or some other parameter suitable for tracing

the plumes from mixing with the pit lakes, should be conducted to determine the spatial extent of effects in LDG. It is anticipated that sampling at multiple times during the open water season would be required to address seasonal variation in mixing as well as stabilization after initial breaching of the dikes.

38. After the spatial extent of the effect of the pit lakes has been established, sampling sites should be located close to and further from the breaches to determine the extent to which water quality in LDG is affected by the pit lakes.

39. Parameters should include those included in the AEMP, and compared to AEMP benchmarks and background conditions in the LDG.

40. Sediment quality sampling should continue after breaching in areas used by fish.

41. DDMI should describe how they will monitor for unacceptable water quality in the pit in relation to the contingency plan to close the breaches.

42. See the proposed monitoring plans included in NSC, July 2019 and SEC, July 2019 for further detail.

43. Please refer to the fish section (Section 7.0) of this document for recommendations for fish and fish habitat monitoring.

Descriptions of Contingency Plans

44. DDMI should develop a description of the contingency plan to re-close the dike after breaching. This description should be sufficiently detailed to allow assessment of the feasibility of DDMI being able to execute the plan and should provide the worst-case time period between unacceptable water quality occurring, detection, and finalizing closing the breaches.

45. DDMI should provide more information on the potential impacts associated with the contingency plans, and on how it has incorporated the views and desires of Affected Communities and Aboriginal Peoples in describing these impacts. The assessment of impacts should be based on updated definitions

of significance (see recommendations in Section 1: Definition of Significance), particularly with respect to impacts on cultural use.

46. DDMI should describe the impact on LDG of loadings associated with unanticipated mixing of the pit lakes.

Revised Closure Objectives

47. MVEIRB should identify an effective closure and reclamation plan as a key mitigation measure for addressing long-term effects of the PKMW Project. To ensure that this mitigation will be effective, the MVEIRB should establish requirements for timely updating of the closure and reclamation plan to incorporate the PKMW Project. Updated closure planning should include updates of closure objectives and criteria to address potential interactions between VCs and PK stored in pits, as well as changes in conditions at the PKC Facility. MVEIRB should also require a comprehensive reclamation research project to investigate methods for closure and reclamation of PK slimes (see section 13 for EMAB's views on the slimes in relation to this project proposal).

Cumulative Effects on Water Quality

48. To support its assessment of cumulative effects, the MVEIRB should seek additional clarification about the methods used to predict cumulative effects to water quality.

PK Slimes

49. We recommend that DDMI be required to evaluate feasibility of relocation of the slimes to the pits as a condition of any project approval and provide justification as to why re-mining of the slimes for pit disposal should not be undertaken.

50. It should be a condition of any approval of the PKMW project that DDMI should proceed with the Feasibility Assessment at the earliest possible opportunity to get a clear understanding of timing requirements as well as the potential effects and benefits of re-mining. The timing of the assessment

should be brought forward, not pushed back to 2021 as currently proposed by DDMI.

9.1 DDMI's Response to EMAB's Recommendations

1. It is DDMI's view after considering all of the Interventions that Parties appear to understand DDMI proposal and the potential adverse impacts and have made many reasonable recommendations for mitigation and monitoring.

2. DDMI would be pleased to participate in any such post assessment review, if requested, to provide input from the developers perspective.

3. DDMI supports the funding provided to Indigenous Groups by the Federal Government and believes it has allowed for a more inclusive and informed review process.

4. The environmental assessment methods used to develop the Summary Impact Statement, including attributes for characterizing residual effects and thresholds for significance, are based on a framework developed by Stantec that has been used in environmental assessments under the Canadian Environmental Assessment Act, 2012 (CEAA 2012), Nunavut Planning and Project Assessment Act, MVRMA and Inuvialuit Final Agreement. These methods are fundamentally unchanged from those used by DDMI in its 1998 Comprehensive Study, which was developed to meet the requirements of the former (prior to 2012) Canadian Environmental Assessment Act.

   These methods are also consistent with both federal and MVEIRB guidance, in that reasoned argumentation is used to apply relevant standards, guidelines and objectives to establish a definition or limit of significance for a specific environmental effect. Notably, previous decisions by regulators in respect of significance (e.g., CEAA's Comprehensive Study Report, 1999) and currently applicable benchmarks (e.g., AEMP) where applicable, are directly applied in the assessment.

5. DDMI agrees with this recommendation particularly with regard to thresholds for significance of cultural effects. DDMI has proposed an approach to better define TK-based criteria for assessing pit lake water quality (please see cover letter to this Intervention Response).

6. It is DDMI's understanding that the details for operationalizing significance thresholds will be developed at the regulatory phase of the approval process for the proposed PKMW Project. As an example, the WLWB, as part of Water Licencing Process, reviews and approves AEMPs and associated actions/mitigations to be taken if specific thresholds (action levels) of effects to aquatic valued components, such as water quality and aquatic life, are exceeded.

7. DDMI has generally accepted these recommendations (please see cover letter to this Intervention Response).

8. DDMI will review additional data and analysis to determine if water quality in the pit lakes are expected to be within AEMP benchmarks in the surface 40 m. DDMI will provide both the modelling results and the analysis as a submission to the WLWB for approval prior to proceeding with any PK deposition.

9. DDMI notes that the environmental assessment of the PKMW Project has been prepared to meet the requirements of the Mackenzie Valley Resource Management Act and to facilitate a decision by the Mackenzie Valley Environmental Impact Review Board on the significance of impacts of the PKMW Project on the environment, including the impact of accidents or malfunctions, as well as the cumulative impacts of the PKMW Project combined with other developments in the vicinity of the Project.

   Environmental assessment methods used to develop the Summary Impact Statement are based on a framework developed by Stantec that has been used in environmental assessments under the Canadian Environmental Assessment Act, 2012 (CEAA 2012), Nunavut Planning and Project Assessment Act, MVRMA and Inuvialuit Final Agreement. These methods are fundamentally unchanged from those used by DDMI in its 1998 Comprehensive Study, which was developed to meet the requirements of the former (prior to 2012) Canadian Environmental Assessment Act.

   To inform the assessment of potential impacts of the Project on water quality, standard attributes, including magnitude, have been used to characterize residual effects on water quality.

In the SIS, the magnitude of effects on water quality are categorized as Negligible (no measurable change or the concentration of the parameter is less than 5% above the AEMP benchmarks); Low (a measurable change with the concentration exceeding the AEMP benchmark by 5 to 10%); Moderate (a measurable change that exceeds the AEMP benchmark by more than 10% but less than or equal to 20%); and High (a measurable change that exceeds the AEMP benchmark by more than 20%).

DDMI further notes that its environmental assessment methods are consistent with both federal and MVEIRB guidance, in that reasoned argumentation is used to apply relevant standards, guidelines and objectives to establish a definition or limit of significance for a specific environmental effect. Notably, previous decisions by regulators in respect of significance (e.g., CEAA's Comprehensive Study Report, 1999) and currently applicable benchmarks (e.g., AEMP) where applicable, are directly applied in the assessment.

10. EMAB's rationale in support of this recommendation references closure objective M1 – water quality in the flooded pit that is protective of aquatic life. DDMI has proposed the closure criteria be established at AEMP benchmark levels. EMAB has agreed that aquatic effects would be unlikely if effects remain below AEMP benchmarks. The only time thresholds were adjusted were to define effects magnitudes in the SIS and the rationale for this is provided in the SIS.

11. DDMI accepts Interveners request to remove the A21 mine workings from further consideration (please see cover letter to this Intervention Response).

12. Please see response to EMAB Recommendation#11.

13. In DDMI's view, the specific terms and conditions that will define the monitoring plans related to pit lake(s) should be established by the Wek'èezhìi Land and Water Board (WLWB) through the review of the Water Licence Amendment for the Processed Kimberlite to Mine Workings and the specific monitoring plans should be established through updates, reviews and approvals to Diavik's Closure and Reclamation Plan and AEMP Design Plan. In general, once a pit has been filled, DDMI has proposed to monitor water quality following an established Surveillance Network Program (SNP). DDMI

believes there is sufficient alignment on the general scope of the proposed monitoring such that it could be consolidated into monitoring Conditions within an Amended Water License. Based on current technical understanding, valuable monitoring of sediment quality in the pit lake is not possible because the substrate will either consist of consolidated PK or blasted rock, neither of which would provide valuable information to inform the protection of aquatic ecosystem health in the pit lake.

14. In DDMI's view, the specific terms and conditions that will define the monitoring plans related to sediment quality of pit lake(s) should be established by the Wek'èezhìi Land and Water Board (WLWB) through the review of the Water Licence Amendment for the Processed Kimberlite to Mine Workings and the specific monitoring plans should be established through updates, reviews and approvals to Diavik's Closure and Reclamation Plan and AEMP Design Plan. Based on DDMI's current technical understanding, valuable monitoring of sediment quality in the pit lake is not possible because the substrate will either consist of consolidated PK or blasted rock, neither of which would provide valuable information to inform the protection of aquatic ecosystem health in the pit lake.

15. At the WLWB Water License Amendment Technical Session, DDMI's Geotechnical Engineer explained that filling the underground mine voids in A418 with PK material would improve pit wall stability in the lower sections of the mine and that filling the open-pit with water would eliminate wall pore-water pressure improving pit wall stability. A pit wall failure of sufficient magnitude to fully mix the A418 pit lake was described as very rare. This was also described in DDMI's response to WLWB IR#5 (PR#16). Given that a significant post closure pit wall failure is very rare, it is very unlikely to impact recreational and subsistence use of the area post closure.

16. DDMI agrees with EMAB that it would be beneficial to develop TK-based criteria for evaluating the acceptability of pit lake conditions for reconnection. DDMI has proposed specific measures to be taken immediately to attempt to address this (please see cover letter to this Intervention Response).

17. In DDMI's view, the specific terms and conditions that will define the monitoring plans related to fish use of pit lake(s) should be established by the Wek'èezhìi Land and Water Board (WLWB) through the review of the Water

Licence Amendment for the Processed Kimberlite to Mine Workings and the specific monitoring plans should be established through updates, reviews and approvals to Diavik's Closure and Reclamation Plan and AEMP Design Plan. In general, if monitoring of fish use in the pelagic zone is determined to be necessary and valuable, DDMI expects that acoustic monitoring is likely the most effective method to monitor for use. DDMI would like to emphasize that fish use of the pit lake cannot be a requirement as this cannot be guaranteed regardless of pit lake access, water quality or general ecological health.

18. DDMI agrees with EMAB's recommendation and commits to developing and implementing monitoring plan(s) for enhanced fish habitat that is established at Diavik as a condition of applicable Fisheries Act Authorizations.

19. DDMI suggests that dissolved oxygen (DO) predictions for the A154 pit could be conducted in parallel with updated modelling that would be submitted as part of the Processed Kimberlite Containment in Mine Working Design Report for the A154 mine if it was selected as the final PK deposition location. The similarity between A418 and A154 mine working configurations and modelling results suggests dissolved oxygen (DO) predictions for the A154 pit lake would not differ significantly from the A418 predictions. DDMI has accepted Interveners recommendation to remove A21 from consideration for processed kimberlite deposition, thus further consideration is not required.

20. In DDMI's view, the specific terms and conditions that will define the monitoring plans related to DO in pit lake(s) should be established by the Wek'èezhìi Land and Water Board (WLWB) through the review of the Water Licence Amendment for the Processed Kimberlite to Mine Workings and the specific monitoring plans should be established through updates, reviews and approvals to Diavik's Closure and Reclamation Plan and AEMP Design Plan. In general, once a pit has been filled, DDMI would monitor water quality following an established Surveillance Network Program (SNP). DDMI believes there is sufficient alignment on the general scope of the proposed monitoring such that it could be consolidated into monitoring Conditions within an Amended Water License.

21. In DDMI's view, the specific terms and conditions that will define the monitoring plans related to water quality in pit lake(s) should be established by the Wek'èezhìi Land and Water Board (WLWB) through the review of the

Water Licence Amendment for the Processed Kimberlite to Mine Workings and the specific monitoring plans should be established through updates, reviews and approvals to Diavik's Closure and Reclamation Plan and AEMP Design Plan. In general, once a pit has been filled, DDMI would monitor water quality following an established Surveillance Network Program (SNP). DDMI believes there is sufficient alignment on the general scope of the proposed monitoring such that it could be consolidated into monitoring Conditions within an Amended Water License. DDMI also emphasizes that the development and maintenance of meromixis or a chemocline is not required for the protection of aquatic life, rather water quality in the top 40 m of the water column should remain below AEMP Benchmarks.

22. According to the currently approved Diavik AEMP Design Version 4.1, a large-bodied fish health survey will only be completed if triggered by the small-bodied fish health survey (i.e., Action Level 2 is reached). In DDMI's view, any change to the fish tissue survey described in the AEMP Design should be established by the Wek'èezhìi Land and Water Board (WLWB) through updates, reviews and approvals to Diavik's AEMP Design Plan. These updates may be informed by terms and conditions set by the WLWB through the review of the Water Licence Amendment for the Processed Kimberlite to Mine Workings.

23. In DDMI's view, any change to aquatic biota surveys should be established by the WLWB through updates, reviews and approvals to Diavik's AEMP Design Plan. These updates may be informed by terms and conditions set by the WLWB through the review of the Water Licence Amendment for the Processed Kimberlite to Mine Workings. In general, the installation of fish-screens on the pump intakes screens will prevent the transfer of fish into the pit lakes during infilling preventing exposure to pit lake water prior to breaching. Should a limited population of benthic invertebrates be introduced to the pit lake during infilling, these biota that may have interacted with higher concentrations of PK pore water (early during infilling phase) would be isolated to deeper sections of the pit lake (PK surface) below the depth which fish primarily use (below 40 m). Therefore, it is highly unlikely this limited deep benthic invertebrate community could impact metal concentrations in fish that would also not gain access to the pit lake until after pit water quality was confirmed to be acceptable for fish.

24. DDMI does not expect any greater potential for wildlife interaction with pit water quality during operations than what is currently managed by DDMI for PKC pond water quality. As noted by EMAB, DDMI has described the existing wildlife monitoring and management procedures that are proposed to mitigate wildlife use of the pit.

25. In DDMI's view, the specific terms and conditions that will define the monitoring plans related to pit lake(s) should be established by the WLWB through the review of the Water Licence Amendment for the Processed Kimberlite to Mine Workings and the specific monitoring plans should be established through updates, reviews and approvals to Diavik's Closure and Reclamation Plan and AEMP Design Plan. In general, once a pit has been filled, DDMI has proposed to monitor water quality following an established Surveillance Network Program (SNP). DDMI believes there is sufficient alignment on the general scope of the proposed monitoring such that it could be consolidated into monitoring Conditions within an Amended Water License. Based on current technical understanding, valuable monitoring of sediment quality in the pit lake is not possible because the substrate will either consist of consolidated PK or blasted rock, neither of which would provide valuable information to inform the protection of aquatic ecosystem health in the pit lake. In addition, DDMI has proposed to update model predictions after pit filling but before dike breaching to increase confidence in predictions through the calibration of model inputs and assumptions.

26. In DDMI's view, the specific terms and conditions that will define the monitoring plans to assist in model calibration of pit lake(s) should be established by the WLWB through the review of the Water Licence Amendment for the Processed Kimberlite to Mine Workings and the specific monitoring plans should be established through updates, reviews and approvals to Diavik's Closure and Reclamation Plan and AEMP Design Plan. In general, once a pit has been filled, DDMI has proposed to monitor water quality following an established Surveillance Network Program (SNP). DDMI believes there is sufficient alignment on the general scope of the proposed monitoring such that it could be consolidated into monitoring Conditions within an Amended Water License. In addition, DDMI has proposed to update model predictions after pit filling but before dike breaching to increase confidence in predictions through the calibration of model inputs and assumptions.

27. In DDMI's view, the specific terms and conditions that will define the monitoring plans related to water quality in pit lake(s) should be established by the Wek'èezhìi Land and Water Board (WLWB) through the review of the Water Licence Amendment for the Processed Kimberlite to Mine Workings and the specific monitoring plans should be established through updates, reviews and approvals to Diavik's Closure and Reclamation Plan and AEMP Design Plan. In general, once a pit has been filled, DDMI would monitor water quality following an established Surveillance Network Program (SNP). DDMI believes there is sufficient alignment on the general scope of the proposed monitoring such that it could be consolidated into monitoring Conditions within an Amended Water License. DDMI also emphasizes that the development and maintenance of meromixis or a chemocline is not required for the protection of aquatic life, rather water quality in the top 40 m of the water column should remain below AEMP Benchmarks.

28. In DDMI's view, the specific terms and conditions that will define the monitoring plans related to water quality in pit lake(s) should be established by the WLWB through the review of the Water Licence Amendment for the Processed Kimberlite to Mine Workings and the specific monitoring plans should be established through updates, reviews and approvals to Diavik's Closure and Reclamation Plan and AEMP Design Plan. In general, once a pit has been filled, DDMI would monitor water quality following an established Surveillance Network Program (SNP). The SNP monitoring proposed by DDMI both during operations and to demonstrate compliance with a reconnection criterion has been described throughout the Water License Amendment and Environmental Assessment Processes (e.g. MVEIRB IR#10). DDMI believes there is sufficient alignment on the general scope of the proposed monitoring such that it could be consolidated into monitoring Conditions within an Amended Water License. DDMI also emphasizes that the development and maintenance of meromixis or a chemocline is not required for the protection of aquatic life, rather water quality in the top 40 m of the water column should remain below AEMP Benchmarks.

29. In DDMI's view, the specific terms and conditions that will define the monitoring plans related to water quality in pit lake(s) should be established by the WLWB through the review of the Water Licence Amendment for the Processed Kimberlite to Mine Workings and the specific monitoring plans should be established through updates, reviews and approvals to Diavik's

Closure and Reclamation Plan and AEMP Design Plan. In general, once a pit has been filled, DDMI would monitor water quality following an established Surveillance Network Program (SNP). The SNP monitoring proposed by DDMI both during operations and to demonstrate compliance with a reconnection criterion has been described throughout the Water License Amendment and Environmental Assessment Processes (e.g. MVEIRB IR#10). DDMI believes there is sufficient alignment on the general scope of the proposed monitoring such that it could be consolidated into monitoring Conditions within an Amended Water License.

30. In DDMI's view, the specific terms and conditions that will define the monitoring plans related to water quality in pit lake(s) should be established by the WLWB through the review of the Water Licence Amendment for the Processed Kimberlite to Mine Workings and the specific monitoring plans should be established through updates, reviews and approvals to Diavik's Closure and Reclamation Plan and AEMP Design Plan. In general, once a pit has been filled, DDMI would monitor water quality following an established Surveillance Network Program (SNP). The SNP monitoring proposed by DDMI both during operations and to demonstrate compliance with a reconnection criterion has been described throughout the Water License Amendment and Environmental Assessment Processes (e.g. MVEIRB IR#10). DDMI believes there is sufficient alignment on the general scope of the proposed monitoring such that it could be consolidated into monitoring Conditions within an Amended Water License.

31. In DDMI's view, the specific terms and conditions that will define the monitoring plans related to pit lake sediment should be established by the WLWB through the review of the Water Licence Amendment for the Processed Kimberlite to Mine Workings and the specific monitoring plans should be established through updates, reviews and approvals to Diavik's Closure and Reclamation Plan and AEMP Design Plan. Based on DDMI's current technical understanding, valuable monitoring of sediment quality in the pit lake is not possible because the substrate will either consist of consolidated PK or blasted rock, neither of which would provide valuable information to inform the protection of aquatic ecosystem health in the pit lake.

32. All Diavik monitoring programs are based on the principles of adaptive management and each iteration undergoes significant public review.

33. In DDMI's view, the specific terms and conditions that will define the monitoring plans related to water quality in pit lake(s) should be established by the Wek'èezhìi Land and Water Board (WLWB) through the review of the Water Licence Amendment for the Processed Kimberlite to Mine Workings and the specific monitoring plans should be established through updates, reviews and approvals to Diavik's Closure and Reclamation Plan and AEMP Design Plan. In general, once a pit has been filled, DDMI would monitor water quality following an established Surveillance Network Program (SNP). The SNP monitoring proposed by DDMI both during operations and to demonstrate compliance with a reconnection criterion has been described throughout the Water License Amendment and Environmental Assessment Processes (e.g. MVEIRB IR#10). DDMI expects to continue this monitoring after breaching the dikes to evaluate if pit lake water quality conditions remain stable. DDMI believes there is sufficient alignment on the general scope of the proposed monitoring such that it could be consolidated into monitoring Conditions within an Amended Water License. DDMI also emphasizes that the development and maintenance of meromixis or a chemocline is not required for the protection of aquatic life, rather water quality in the top 40 m of the water column should remain below AEMP Benchmarks.

34. In DDMI's view, the specific terms and conditions that will define the monitoring plans related to water quality in pit lake(s) should be established by the WLWB through the review of the Water Licence Amendment for the Processed Kimberlite to Mine Workings and the specific monitoring plans should be established through updates, reviews and approvals to Diavik's Closure and Reclamation Plan and AEMP Design Plan. In general, once a pit has been filled, DDMI would monitor water quality following an established Surveillance Network Program (SNP). The SNP monitoring proposed by DDMI both during operations and to demonstrate compliance with a reconnection criterion has been described throughout the Water License Amendment and Environmental Assessment Processes (e.g. MVEIRB IR#10). DDMI believes there is sufficient alignment on the general scope of the proposed monitoring such that it could be consolidated into monitoring Conditions within an Amended Water License. DDMI also emphasizes that

the development and maintenance of meromixis or a chemocline is not required for the protection of aquatic life, rather water quality in the top 40 m of the water column should remain below AEMP Benchmarks.

35. In DDMI's view, the specific terms and conditions that will define the monitoring plans related to water quality in pit lake(s) should be established by the WLWB through the review of the Water Licence Amendment for the Processed Kimberlite to Mine Workings and the specific monitoring plans should be established through updates, reviews and approvals to Diavik's Closure and Reclamation Plan and AEMP Design Plan. In general, once a pit has been filled, DDMI would monitor water quality following an established Surveillance Network Program (SNP). The SNP monitoring proposed by DDMI both during operations and to demonstrate compliance with a reconnection criterion has been described throughout the Water License Amendment and Environmental Assessment Processes (e.g. MVEIRB IR#10). DDMI expects to continue this monitoring after breaching the dikes to evaluate if pit lake water quality conditions remain stable. DDMI believes there is sufficient alignment on the general scope of the proposed monitoring such that it could be consolidated into monitoring Conditions within an Amended Water License.

36. In DDMI's view, the specific terms and conditions that will define the monitoring plans related to water quality in pit lake(s) should be established by the WLWB through the review of the Water Licence Amendment for the Processed Kimberlite to Mine Workings and the specific monitoring plans should be established through updates, reviews and approvals to Diavik's Closure and Reclamation Plan and AEMP Design Plan. In general, once a pit has been filled, DDMI would monitor water quality following an established Surveillance Network Program (SNP). The SNP monitoring proposed by DDMI both during operations and to demonstrate compliance with a reconnection criterion has been described throughout the Water License Amendment and Environmental Assessment Processes (e.g. MVEIRB IR#10). DDMI expects to continue this monitoring after breaching the dikes to evaluate if pit lake water quality conditions remain stable. DDMI believes there is sufficient alignment on the general scope of the proposed monitoring such that it could be consolidated into monitoring Conditions within an Amended Water License. DDMI emphasizes that a pit wall failure of sufficient magnitude to fully mix the pit lake was described as very rare.

37. In DDMI's view, the specific terms and conditions that will define the monitoring plans related to water quality in pit lake(s) should be established by the WLWB through the review of the Water Licence Amendment for the Processed Kimberlite to Mine Workings and the specific monitoring plans should be established through updates, reviews and approvals to Diavik's Closure and Reclamation Plan and AEMP Design Plan. DDMI believes there is sufficient alignment on the general scope of the proposed monitoring such that it could be consolidated into monitoring Conditions within an Amended Water License.

38. In DDMI's view, the specific terms and conditions that will define the monitoring plans related to water quality in pit lake(s) should be established by the WLWB through the review of the Water Licence Amendment for the Processed Kimberlite to Mine Workings and the specific monitoring plans should be established through updates, reviews and approvals to Diavik's Closure and Reclamation Plan and AEMP Design Plan. DDMI believes there is sufficient alignment on the general scope of the proposed monitoring such that it could be consolidated into monitoring Conditions within an Amended Water License.

39. In DDMI's view, the specific terms and conditions that will define the monitoring plans related to water quality in pit lake(s) should be established by the WLWB through the review of the Water Licence Amendment for the Processed Kimberlite to Mine Workings and the specific monitoring plans should be established through updates, reviews and approvals to Diavik's Closure and Reclamation Plan and AEMP Design Plan. DDMI believes there is sufficient alignment on the general scope of the proposed monitoring such that it could be consolidated into monitoring Conditions within an Amended Water License.

40. In DDMI's view, the specific terms and conditions that will define the monitoring plans related to pit lake sediment should be established by the (WLWB) through the review of the Water Licence Amendment for the Processed Kimberlite to Mine Workings and the specific monitoring plans should be established through updates, reviews and approvals to Diavik's Closure and Reclamation Plan and AEMP Design Plan. Based on DDMI's current technical understanding, valuable monitoring of sediment quality in the pit lake is not possible because the substrate will either consist of

consolidated PK or blasted rock, neither of which would provide valuable information to inform the protection of aquatic ecosystem health in the pit lake.

41. In DDMI's view, the specific monitoring plan for pit water quality should be established by the WLWB through the review of the Water Licence Amendment for the Processed Kimberlite to Mine Workings and adjusted through updates/approvals to Diavik's Closure and Reclamation Plan. In general, once the dike has been breached, DDMI would monitor water quality following an established Surveillance Network Program (SNP). Should SNP monitoring confirm unacceptable water quality in the top 40 m of the pit lake water column the contingency plan would be to prohibit Lac de Gras fish from accessing the pit lake by infilling in the breaches.

42. Acknowledged and in DDMI's view, the specific terms and conditions that will define the monitoring plans related to water quality in pit lake(s) should be established by the WLWB through the review the Processed Kimberlite to Mine Workings and the specific monitoring plans should be established through updates, reviews and approvals to Diavik's Closure and Reclamation Plan and of the Water Licence Amendment for AEMP Design Plan. DDMI believes there is sufficient alignment on the general scope of the proposed monitoring such that it could be consolidated into monitoring Conditions within an Amended Water License.

43. Acknowledged and in DDMI's view, the specific terms and conditions that will define the monitoring plans related to fish and fish habitat in pit lake(s) should be established by the WLWB through the review the Processed Kimberlite to Mine Workings and the specific monitoring plans should be established through updates, reviews and approvals to Diavik's Closure and Reclamation Plan and of the Water Licence Amendment for AEMP Design Plan. DDMI believes there is sufficient alignment on the general scope of the proposed monitoring such that it could be consolidated into monitoring Conditions within an Amended Water License. In general, if monitoring of fish use in the pit is determined to be necessary and valuable, DDMI expects that acoustic monitoring is likely the most effective method to monitor for use. DDMI would like to emphasize that fish use of the pit lake cannot be a requirement as this cannot be guaranteed regardless of pit lake access, water quality or general ecological health.

44. DDMI has developed the requested contingency plan and provided this description as noted by EMAB. If the Project proceeds, DDMI will expand the plan to provide more detail including likely time to execute closing of the breaches.

45. It is DDMI's view that the level of assessment provided in the SIS for this unlikely event is appropriate.

46. It is DDMI's view that the level of assessment provided in the SIS for this unlikely event is appropriate.

47. DDMI acknowledges EMAB's recommendation and commits to engaging with stakeholders, including regulatory agencies, Indigenous Groups and EMAB, as part of ongoing closure planning for Diavik to ensure robust science-based and TK-based closure criteria are developed and implemented for the Project.

48. DDMI welcomes any additional clarifications the MVEIRB may have. We note that the Board has been very active in issuing Information Requests and DDMI has tried to provide full responses to each.

49. DDMI has committed to evaluating the feasibility of relocating extra fine processed kimberlite (EFPK) as part of closure planning for the processed kimberlite containment facility (PKC). MVEIRB confirmed that this activity is outside the scope of this Environmental Assessment.

50. DDMI has committed to evaluating the feasibility of relocating EFPK as part of closure planning for the PKC. MVEIRB confirmed that this activity is outside the scope of this Environmental Assessment.

10. Deninu Kue First Nation (DKFN) – Recommendations

Water Quality Model and Residual Effects Characterization

1. It is strongly recommended that a third-party review of the water quality model be conducted to identify areas of improvement prior to decision on the environmental assessment. Specific elements of the water quality model that should be reviewed, at minimum, include:

    a) The resuspension module to understand the characteristics of the settleable constituent relative to FPK and EFPK; and

    b) The assumption that there is no (or negligible) run-off from the rock wall in comparison to other inflows.

Fish and Fish Habitat – Uncertainty Regarding Stratification and Water Quality

2. To ensure the long-term protection of fish and fish habitat it is recommended that pit A21 be removed from consideration for processed kimberlite deposition. As well, it is recommended that DDMI conduct a literature search and/or supporting study to identify an evidence-based depth threshold to define the extent of fish habitat within the proposed pit lakes.

Fish and Fish Habitat – Siltation and Disturbance to Stratification During Breaching of Dikes

3. It is recommended that DDMI clearly outline the methods and mitigation to be used during breaching of the dikes as this is an important component of an impact assessment for fish and fish habitat. A proactive contingency plan should also be developed, which includes detailed monitoring, to ensure that breaching is ceased prior to water quality parameters exceeding thresholds.

Wildlife and Wildlife Habitat – Considerations for Caribou

4. Management recommendations in the range plan state that the Cumulative Land Disturbance Framework contained in the range plan should guide land

and resource decision-making by all authorities involved in such decisions until Land Use Plans on the range are completed or revised.

Management thresholds are included in the range plan that are informed by traditional knowledge, caribou biology, societal risk tolerance and are reflective of the precautionary decision making for Bathurst herd management (Government of Northwest Territories 2018). These thresholds reflect a balance of the ecological, cultural and socio-economic values. The Diavik Diamond Mine is located in the Central Tundra range assessment area of the Northwest Territories (i.e., Area 2). Given the current level of disturbance in this area, activities pose a higher risk to caribou recovery compared to other areas (Government of Northwest Territories 2018). As such, a cautionary approach to caribou management, including the prediction of project related effects, is required. In its assessment of potential impacts of the PKMW project on caribou, DDMI did not demonstrate a cautionary level of consideration that showed an understanding of the socio-cultural and ecological risks.

10.1 DDMI's Response to DKFN's Recommendations

1. DDMI accepts the recommendation for an Independent Review. DDMI recommends that the review be conducted on the updated modelling that DDMI has committed to submitting to the WLWB for approval as part of the Processed Kimberlite Containment in Mine Working Design Report prior to depositing PK in mine workings. The updated modelling is expected to include the specific concerns noted. The independent review could be similar in concept to the independent reviews required for key engineered structures. Please see also a summary of key commitment in the cover letter to this Intervention Response.

2. DDMI accepts Interveners request to remove the A21 mine workings from further consideration (please see cover letter to this Intervention Response).

3. Breaching would occur using heavy equipment to excavate the dike material. Turbidity barriers would be placed in Lac de Gras (LDG) to ensure suspended solids associated with the deconstruction activities do not adversely impact fish and fish habitat in LDG. Daily monitoring of water quality in LDG may be required to ensure the turbidity barriers remain effective during the in-lake construction work. In DDMI's view, the specific

terms and conditions should be established by the Wek'èezhìi Land and Water Board (WLWB) through the review the Processed Kimberlite to Mine Workings Water License Amendment and the specific monitoring and deconstruction plans should be established through updates, reviews and approvals to Diavik's Closure and Reclamation Plan.

4. DDMI recognizes the importance of the Bathurst caribou herd to northern residents and indigenous communities as stated in Section 7.1.1.1 of the Summary Impact Statement for the PKMW Project. DDMI reviewed and considered the Draft Bathurst Caribou Range Plan (BCRP) (GNWT 2018) as part of the assessment to better understand the key concerns and issues as well as management recommendations as discussed in Section 7.1.2.3 "Additional Guidance". The Summary Impact Statement acknowledges that the Diavik Mine occurs in Area 2, which has been assessed as having an estimated cumulative land disturbance status that is considered cautionary.

   The disturbance thresholds identified as part of the Cumulative Land Disturbance Framework are designed to help manage potential cumulative and incremental effects at the range scale (GNWT 2018). It should be emphasized, however, the Processed Kimberlite to Mine Workings (PKMW) Project occurs within an existing footprint; and therefore, will not result in additional direct disturbance within the Bathurst caribou range as discussed in Section 7.3.1 of the Summary Impact Statement. As such, the Project would not contribute to an incremental increase in the total human-caused disturbance threshold (4,500 km2 - 9,000 km2) identified for Area 2 under a cautionary disturbance tier as defined in the BCRP (GNWT 2018).

   Overall, DDMI's assessment of potential Project effects on caribou including existing and proposed mitigation measures as well as a commitment to continue the on-going Wildlife Monitoring Program, demonstrates an understanding of the ecological and socio-cultural importance of caribou in the region.

Reference

Government of the Northwest Territories (GNWT). 2018. Draft Bathurst Caribou Range Plan 2018. Department of Environment and Natural Resources, Yellowknife,

NT. 74 pp. Available at:
https://www.enr.gov.nt.ca/sites/enr/files/resources/draft_bathurst_caribou_range_plan.pdf

11. North Slave Metis Alliance (NSMA) – Recommendations

Significance Thresholds for Water Quality (SIS Section 4)

1. Due to the current proposed water quality thresholds being much higher than the baseline water quality, the Review Board should consider more conservative definitions for water quality significance thresholds.

Significance Threshold for Wildlife (SIS Section 7)

2. NSMA recommends the Review Board to make a significance determination based on magnitude ratings that are supported by evidence, and considers the current state of Bathurst caribou and not solely based on the 1999 CSR.

AEMP Benchmark – Zinc (SIS Section 4)

3. The Board should require DDMI update their zinc benchmark threshold to match the current CCME guideline, to utilize up-to-date scientific information and ensure the best ecological protection available.

Climate Change Impact on Meromictic Condition (SIS Section 4)

4. NSMA recommends additional modeling that takes into account the range of conditions that could be expected in consideration of the influences of climate change on upwelling. The modeling results should be provided to the WLWB prior to the approval of the Type A Water Licence (W2015L2- 0001).

Presence of fish species below 40m depth in pit lakes (SIS Section 6)

5. In order to confirm the potential use and impacts of the >40m zone of the pits by sculpins and any other deep-dwelling fish species, the Board should

recommend the proponent design a study focused on the abiotic zone of the pits (below 40m). This study could include the following:

- Abiotic parameters below 40m depth;
- Camera documentation of fish species presence below 40m depth;
- The impacts of the >40m environment on fish species health (e.g., effects of PK on gill function of slimy sculpins);
- Possible adaptive management options based on the results of this study.

Nitrite Concentration of Pit Water (SIS Section 4 and 6)

6. When conducting the environmental assessment, MVEIRB should acknowledge the potential for the PK disposal to affect wildlife habitat and health during the operational period and consider these effects in the assessment. To mitigate potential effects, MVEIRB should require development/refinement of management plans to incorporate specific requirements for wildlife monitoring and response protocol related to waterfowl and wildlife use of pits during the operational period.

Community-Based Monitoring

7. NSMA recommends the Review Board to require DDMI to facilitate and fund a community-based monitoring program of the closure operations and post-closure conditions of the mines.

11.1 DDMI's Response to NSMA's Recommendations

1. The AEMP Benchmarks have been approved by the WLWB as an important effects benchmark for triggering adaptive management. It is DDMI's view that AEMP Benchmarks are also appropriate for Environmental Assessment determination of significance. DDMI has used AEMP plus 20% to define a high magnitude effect for consistency with the Comprehensive Study Report.

2. DDMI notes that the environmental assessment of the PKMW Project has been prepared to meet the requirements of the Mackenzie Valley Resource

Management Act and to facilitate a decision by the Mackenzie Valley Environmental Impact Review Board on the significance of impacts of the PKMW Project on the environment, including the impact of accidents or malfunctions, as well as the cumulative impacts of the PKMW Project combined with other developments in the vicinity of the Project.

Environmental assessment methods used to develop the Supplementary Impact Statement, including methodology of assessing potential project-specific and cumulative impacts to caribou, use a framework developed by Stantec that has been used in environmental assessments under the Canadian Environmental Assessment Act, 2012 (CEAA 2012), Nunavut Planning and Project Assessment Act, MVRMA and Inuvialuit Final Agreement. These methods are fundamentally unchanged from those used by DDMI in its 1998 Comprehensive Study, which was developed to meet the requirements of the former (prior to 2012) Canadian Environmental Assessment Act.

These methods are also consistent with both federal and MVEIRB guidance, in that reasoned argumentation is used to apply relevant standards, guidelines and objectives to establish a definition or limit of significance for a specific environmental effect. Notably, previous decisions by regulators in respect of significance (e.g., CEAA's Comprehensive Study Report, 1999) and currently applicable benchmarks (e.g., AEMP) where applicable, are directly applied in the assessment.

3. DDMI reviews CCME water quality guidelines for the protection of aquatic life and Health Canada's guidelines for Canadian drinking water quality to inform revisions to the AEMP Benchmarks within the AEMP Design every three years. DDMI does not think it is critical to update AEMP Benchmarks more frequently than this. In DDMI's view, an update to the zinc benchmark will be established in a timely manner by the Wek'èezhìi Land and Water Board (WLWB) through updates, reviews and approvals to AEMP Design Plan (currently underway). AEMP Benchmark updates will be incorporated into future submissions such as the Processed Kimberlite Containment in Mine Working Design Report, which will include updated modelling. Based on a review of SIS model results, the predicted maximum concentrations in the surface water (top section and at 40m) in A154 (scenario 2a, 3a, 41), A418 (scenario 2a, 3a, 4a) remain below the 7 ug/L Zinc value, therefor a

benchmark update would not change the significance finding. DDMI notes the removal of the A21 mine workings from further consideration for PK deposition.

4. DDMI commits to working with the NSMA to understand the specific climate change scenarios that are of interest to NSMA and if practical include these as scenarios for the revised modelling. DDMI proposes to provide the revised modelling as a condition of an amended Water License.

5. In DDMI's view, the specific terms and conditions that will define the monitoring plans related to fish and fish habitat in pit lake(s) should be established by the Wek'èezhìi Land and Water Board (WLWB) through the review of the Processed Kimberlite to Mine Workings Water Licence Amendment and the specific monitoring plans should be established through updates, reviews and approvals to Diavik's Closure and Reclamation Plan and AEMP Design Plan. In general, if monitoring of fish use in the pit is determined to be necessary and valuable, DDMI expects that acoustic monitoring is likely the most effective method to monitor for use. DDMI would like to emphasize that fish use of the pit lake cannot be a requirement as this cannot be guaranteed regardless of pit lake access, water quality or general ecological health. In addition, see Response to NSMA IR#6 on SIS. Scientific and TK evidence to date suggest that fish will not actively use the deep (>40 m) areas of the pit therefore a study does not seem justified.

6. DDMI commits to updating the wildlife monitoring program for Diavik to include the PKMW Project. The updated monitoring program will support site monitoring to determine whether wildlife, including caribou and migratory birds, interact with pit(s)/mine workings during infilling and prior to stabilization of water quality.

7. DDMI continues to work with the TK Panel to identify opportunities and approaches to TK-based monitoring particularly for application to post-closure.

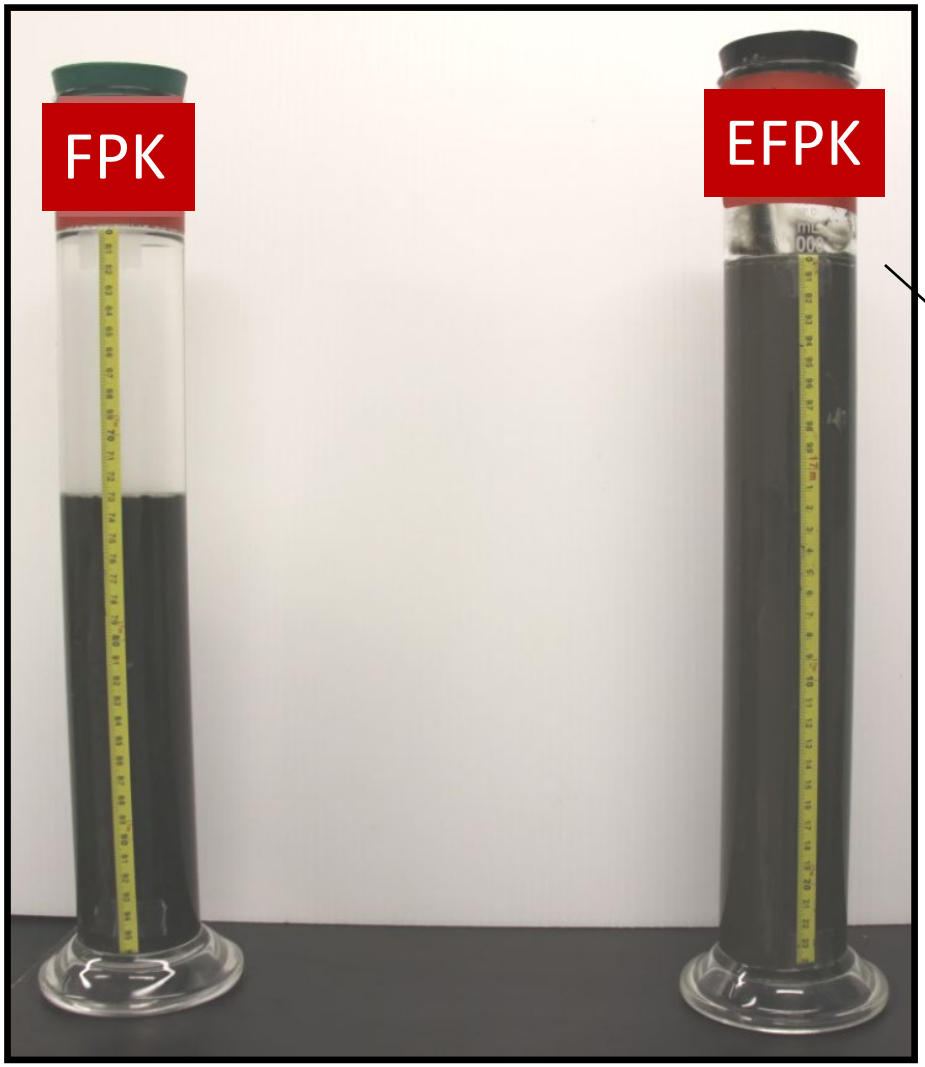
RioTinto

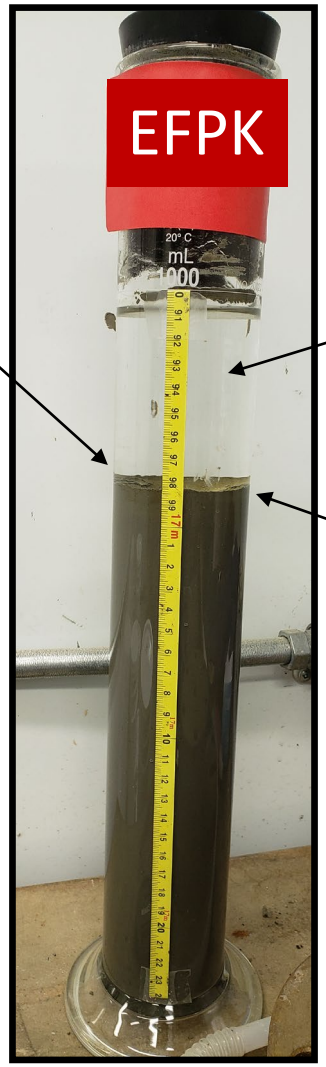
APPENDIX A

Sedimentation Properties of FPK and EFPK

After 24 hours

After 2 months





Very clear decant water

Distinct sediment layer

Sample	Initial Height (cm)	24 hr Height Change (cm)	2 month Height Change (cm)
FPK (Fine Processed Kimberlite)	36	13	15
EFPK (Extra Fine Processed Kimberlite)	36	0.2	8.3

A Video showing how Processed Kimberlite consolidates over time has been posted on the Mackenzie Valley Environmental Impact Review Board's Public Registry