

DDMI Commitments for the Processed Kimberlite to Mine Workings Project Proposal

The following table provides a listing of DDMI’s commitments as part of the Processed Kimberlite to Mine Workings Project Proposal Review.

No.	Subject	Commitment	Project Phase/Timing
Commitments from Summary Impact Statement			
Water Quality			
1	Follow-up and monitoring	<p>Follow-up to verify the environmental effects predictions and effectiveness of mitigation is an important component of this Project and is summarized below:</p> <ul style="list-style-type: none"> • Sample PK porewater to confirm constituent concentrations used in model • Monitor the chemocline development and stability prior to breaching dike (Surveillance Network Program). Include visual monitoring by Traditional Knowledge Panel. • Monitor water quality in the flooded mine workings following dike breaching. • Monitor water quality in Lac de Gras following re-connection of pit lake(s) to Lac de Gras. • Adequately size breaches to optimize water circulation within the closure water cap to meet water quality objectives; and 	<ul style="list-style-type: none"> ▪ All Phases.

No.	Subject	Commitment	Project Phase/Timing
		<ul style="list-style-type: none"> Continue the AEMP in Lac de Gras (water quality, sediment, fish and invertebrates within the water and sediment). 	
2	Timing of breaching of dikes	Breach dikes following receipt of monitoring results that show acceptable water quality (i.e., below AEMP benchmarks) within the pit lake(s).	<ul style="list-style-type: none"> Closure
3	Decision-making process to isolate pit lakes from Lac de Gras	Close the breaches or isolate the pit lake from Lac de Gras if water quality is later determined to pose a risk to water quality, fish and fish habitat, caribou, humans or cultural land uses.	<ul style="list-style-type: none"> Closure and Post-closure
4	Community engagement	Report findings back to Indigenous communities.	<ul style="list-style-type: none"> All Phases
Fish and Fish Habitat			
5	Follow-up and monitoring	<p>In addition to continuation of the ongoing Aquatic Effects Monitoring Program (AEMP), DDMI will:</p> <ul style="list-style-type: none"> Monitor water quality in the pit lakes after the mine workings are filled to determine when and if water quality parameters meet aquatic effects benchmarks. Monitor water quality, particularly TSS and TDS, in Lac de Gras at near-field, mid-field, and far-field areas during the breaching of the mine workings dikes. 	<ul style="list-style-type: none"> All Phases
6	Follow-up and monitoring	DDMI would also work with DFO and Indigenous Groups to identify any follow-up monitoring that may be necessary to adaptive manage	<ul style="list-style-type: none"> All Phases

No.	Subject	Commitment	Project Phase/Timing
		water levels in Lac de Gras and flows in the Coppermine River during the pit infilling periods.	
7	Deposition method	Select a deposition scenario that predicts water quality in the pit lake(s) meets AEMP benchmarks in the top 40m.	<ul style="list-style-type: none"> ▪ Operations
8	Fish interaction with pit lake(s)	Exclude fish from the pit lake(s) until the monitoring program shows that water quality in the top 40 m of the pit lake(s) meets AEMP benchmarks.	<ul style="list-style-type: none"> ▪ Closure
9	Freshwater withdrawal for pit infilling	Work with DFO and Indigenous Groups to finalize water withdrawal rates that will not significantly affect fish habitat in Lac de Gras or the Coppermine River.	<ul style="list-style-type: none"> ▪ Closure
Wildlife and Wildlife Habitat			
10	Follow-up monitoring	<p>In addition to continuation of the on-going Wildlife Monitoring Program, DDMI will monitor:</p> <ul style="list-style-type: none"> • Water quality in the pit lakes after the mine workings are filled to determine when and if water quality parameters meet aquatic effects benchmarks. • Water quality, particularly TSS and TDS, in Lac de Gras at near-field, mid-field, and far-field areas during the breaching of the mine workings dikes. 	<ul style="list-style-type: none"> ▪ Operations and Closure
11	Wildlife interactions with pits/mine workings	Any wildlife observed in the mine workings will be removed prior to pit lake infilling in accordance with applicable regulations. In the case of peregrine falcon nests on the pit walls, recommended	<ul style="list-style-type: none"> ▪ Operations

No.	Subject	Commitment	Project Phase/Timing
		minimum buffer distances in applicable guidelines will be followed until the birds have fledged and left the nests.	
12	Water quality monitoring	Water quality monitoring will be used to assess potential changes in water concentrations of chemical constituents.	<ul style="list-style-type: none"> All phases
13	Wildlife monitoring	Wildlife monitoring to assess potential interactions of wildlife with potential contaminants.	<ul style="list-style-type: none"> All phases
14	Wildlife deterrence	Wildlife deterrent techniques will be implemented as required to reduce interactions with contaminants, if necessary	<ul style="list-style-type: none"> Construction, Operations, and Closure
Cultural Use			
15	Engagement with Indigenous groups	DDMI will continue its engagement with stakeholders, including with the Participation Agreement groups and communities and other Indigenous groups to inform project design and execution.	<ul style="list-style-type: none"> All Phases
16	Engagement with Indigenous groups	DDMI will continue to engage with potentially affected Indigenous groups through the TK Panel Sessions and other engagement activities to better understand Indigenous perceptions about the safety, quality, and health of Lac de Gras and identify practical strategies to address these concerns.	<ul style="list-style-type: none"> All Phases
17	Water quality monitoring	Water quality will be monitored to assess potential changes in concentrations of chemical constituents in comparison to acceptable criteria	<ul style="list-style-type: none"> All Phases
18	Wildlife monitoring	Wildlife monitoring will assess potential interactions of wildlife with potential contaminants.	<ul style="list-style-type: none"> All Phases

No.	Subject	Commitment	Project Phase/Timing
19	Water quality management	Cover the PK and porewater in each mine working with a freshwater cap such that water quality in the top 40 m meets AEMP benchmarks	<ul style="list-style-type: none"> Operations and Closure
20	Water quality management	Breach dikes to connect the pit lakes to Lac de Gras once monitoring shows that water constituents in pit lakes are below Canadian Water Quality guidelines for the Protection of Aquatic Life (CCME 2019) and/or the Aquatic Environmental Monitoring Program (AEMP) Effects Benchmarks	<ul style="list-style-type: none"> Closure
21	Wildlife management	Remove any observed wildlife from pit/dike areas before infilling in accordance with applicable guidelines / regulations	<ul style="list-style-type: none"> Operations and Closure
22	Wildlife monitoring	Monitor area for approaching wildlife during infilling.	<ul style="list-style-type: none"> Operations and Closure
23	Wildlife management	Employ deterrents as required to reduce risks to wildlife.	<ul style="list-style-type: none"> Construction, Operations, and Closure
Commitments from Responses to Interventions			
24	Stakeholder Engagement	<p>Expanded engagement with non-signatory Indigenous Groups</p> <ul style="list-style-type: none"> 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: 	<ul style="list-style-type: none"> All Phases

No.	Subject	Commitment	Project Phase/Timing
		<ul style="list-style-type: none"> 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. 	
25	Traditional Knowledge-based Closure Criteria	<p>Reconnection criteria to define culturally acceptable pit-lake conditions</p> <ul style="list-style-type: none"> ▪ 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: <ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> ▪ Regulatory/Permitting Stage

No.	Subject	Commitment	Project Phase/Timing
		<p>recommended TK-based criteria with the five (5) Indigenous Parties represented on EMAB;</p> <p>iii. Provide opportunity for Indigenous Groups that are not represented on EMAB to review and comment on TK-based criteria;</p> <p>iv. Submit the TK-based re-connection criteria to the Wek'èezhli Land and Water Board (WLWB) for public review and approval as a closure criteria.</p>	
26	Fish and Fish Habitat	<p>Fish habitat off-setting plan</p> <ul style="list-style-type: none"> ▪ With the implementation of proposed mitigation measures, residual environmental effects are not expected to significantly impact pit lake fish habitat, however DDMI acknowledges that some Indigenous Groups have still expressed concern about reconnecting the pit lakes to Lac de Gras. ▪ 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. 	<ul style="list-style-type: none"> ▪ All Phases

No.	Subject	Commitment	Project Phase/Timing
		<ul style="list-style-type: none"> ▪ DDMI will advance alternative off-setting plans by February 1, 2020 if: <ul style="list-style-type: none"> 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. 	
27	A21 Open Pit	<p>Removal of A21 Open-Pit from Review</p> <ul style="list-style-type: none"> ▪ 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 	<ul style="list-style-type: none"> ▪ Environmental Review Stage

No.	Subject	Commitment	Project Phase/Timing
		because of the long lead times inherent in permitting processes.	
28	Water Licence Conditions and Project Follow-up	<p>Conditions to be included in an Amended Water License or as Follow-Up Measures</p> <ul style="list-style-type: none"> ▪ 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: <ul style="list-style-type: none"> a. Additional modelling of pit water quality. <ul style="list-style-type: none"> • DDMI commits to providing updated modelling estimates: <ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> ▪ Regulatory/Permitting Stage and Pre-construction and Construction

No.	Subject	Commitment	Project Phase/Timing
		<ul style="list-style-type: none"> • 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. <p>c. Pit Lake monitoring – operations, after filling, after re-connection.</p> <ul style="list-style-type: none"> • 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. 	

No.	Subject	Commitment	Project Phase/Timing
		<p>d. Wildlife management.</p> <ul style="list-style-type: none"> • DDMI has Standard Operating Procedures for deterring wildlife. DDMI commits to revising these to include wildlife deterrents during pit filling. DDMI will submit these to the Government of Northwest Territories and EMAB for review and will address any recommendations that might come from this review as governed by the Environmental Agreement. <p>e. Monitoring Plans.</p> <ul style="list-style-type: none"> • 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. 	

No.	Subject	Commitment	Project Phase/Timing
Commitments from Hearing			
29	Pre-deposition Water Quality Modelling	If pre-deposition modelling shows that Diavik cannot meet AEMP benchmarks in the top 40 m of the pit lakes, Diavik will not put processed kimberlite in the pit.	<ul style="list-style-type: none"> ▪ Pre-construction
30	Engagement Plan with Deninu Kue First Nation and the Fort Resolution Métis Council	Diavik commits to developing an engagement plan with Deninu Kue First Nation and the Fort Resolution Métis Council, building on the commitment to meet annually	<ul style="list-style-type: none"> ▪ All Phases