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February 22, 2023

File: W2022L2-0001

Mark Cliffe-Phillips
Mackenzie Valley Review Board
200 Scotia Centre
Box 938, 5102-50th Avenue
Yellowknife NT X1A 2N7

Sent by email

Dear Mark Cliffe-Phillips,

Re: Ekati Diamond Mine – Notice of Preliminary Screening Determination – Renewal Application for Water Licence – Mining and Milling – Lac de Gras, NT

The Wek'èezhìi Land and Water Board (Board) met on February 22, 2023 and considered the Application Package from Arctic Canadian Diamond Company Ltd. (Arctic) for Water Licence (Licence) renewal W2022L2-0001 for the Ekati Diamond Mine in accordance with the *Mackenzie Valley Resource Management Act* (MVRMA).

The Board conducted a preliminary screening based on the public record for the proceeding. Based on the evidence provided, the Board is satisfied the screening has been completed according to section 125 of the MVRMA and has decided **not to refer** the changes to the Project to environmental assessment. The Board's Preliminary Screening Determination and Reasons for Decision, as required by section 121 of the MVRMA, is attached.

If the Board does not receive notice of referral to environmental assessment, it will continue with the regulatory proceeding on **March 5, 2023, Sunday**.

The Board and staff look forward to continued communications throughout the pause period. Please contact Ryan Fequet via [email](#) or at (867) 765-4589 with any questions or concerns regarding this letter.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Mason Mantla', with a stylized, cursive script.

Mason Mantla
Chair, Wek'èezhìi Land and Water Board

BCC'd to: Ekati Distribution List
Sheila Chernys, Arctic
Dustin Chaffee, Arctic

Attached: Preliminary Screening Determination and Reasons for Decision



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Preliminary Screening Determination and Reasons for Decision

Water Licence Renewal Application	
File Number	W2022L2-0001
Company	Arctic Canadian Diamond Company Ltd.
Project	Ekati Diamond Mine
Location	Lac de Gras, NT
Activity	Mining and Milling
Date of Decision	February 22, 2023

1.0 Decision

In accordance with subsection 124(1) of the *Mackenzie Valley Resource Management Act* (MVRMA), the Wek'èezhìi Land and Water Board (WLWB or Board) met on February 22, 2023 to make a preliminary screening determination on the renewal Application from Arctic Canadian Diamond Company Ltd. (Arctic) (Applicant) for Water Licence W2022L2-0001 (Licence)¹ for the Ekati Diamond Mine (Project).

The Board has determined that some Project activities and/or areas are exempt from preliminary screening, because they were previously screened or underwent an Environmental Assessment (EA)/Environmental Impact Review (EIR). The Applicant has, however, proposed new Project activities and areas, as discussed in section 3.1, and the Board has decided not to refer the proposed changes to the Project to the Mackenzie Valley Environmental Impact Review Board (the Review Board) for Environmental Assessment because, based on the evidence, it is the Board's opinion that the proposed changes to the Project will not have a significant adverse impact on the environment or be a cause of public concern.

¹ See WLWB Online Registry (www.wlwb.ca) for [Ekati – Renewal – Application Form – Nov 7 22](#)

The Board’s determinations, including reasons for its decisions, are detailed in sections [3.0](#) and [4.0](#).

2.0 List of Defined Terms and Acronyms

Applicant	Arctic Canadian Diamond Company Ltd. (Arctic)
Application	The complete application package submitted by the Applicant for Water Licence W2022L2-0001
Board	Wek’èezhì Land and Water Board
CRP	Closure and Reclamation Plan
EA/EIR	Environmental Assessment/Environmental Impact Review
GNWT	Government of the Northwest Territories
GNWT-ENR	Government of the Northwest Territories – Environment and Natural Resources
GNWT-Lands	Government of the Northwest Territories – Lands
MVLWB	Mackenzie Valley Land and Water Board
MVRMA	Mackenzie Valley Resource Management Act
Minister	Minister of the Government of the Northwest Territories – Environment and Natural Resources (GNWT-ENR)
ORS	Online Review System (www.new.onlinereviewsystem.ca)
Party	As per the MVLWB Rules of Procedures, an applicant, a person, or an organization participating in the regulatory proceeding for the Application.
Project	Ekati Diamond Mine, which is the proposed development (as defined in Part 5 of the MVRMA). ²
Review Board	Mackenzie Valley Environmental Impact Review Board
SCP	Spill Contingency Plan
Standard Licence Conditions	MVLWB Standard Water Licence Conditions Template
TG	Tłıchǫ Government
TK	Traditional Knowledge
URM	Underwater Remote Mining
WMP	Waste Management Plan

3.0 Background and Scope of Screening

Arctic submitted an application for a Type A Water Licence Renewal (W2022L2-0001, as the renewal of W2020L2-0004) on November 1, 2022. Following conformity correspondence with Board staff, an updated application was submitted on November 7, 2022.

² “development” is defined in Part 5 of the MVRMA as:

“any undertaking, or any part or extension of an undertaking, that is carried out on land or water and includes an acquisition of lands pursuant to the *Historic Sites and Monuments Act* and measures carried out by a department or agency of government leading to the establishment of a park subject to the *Canada National Parks Act* or the establishment of a park under a territorial law.”

The renewal application included details on the pre-Application Engagement and on-going engagement, along with an engagement log for the pre-application period.³ Arctic has an approved *Ekati Diamond Mine Engagement Plan* which also describes Arctic's approach and alignment with Board Guidelines.^{4,5}

The licence previously underwent an amendment for the Sable, Pigeon, and Beartooth Pipes Expansion, which required an Environmental Assessment by the Review Board. The associated Report of Environmental Assessment was released on February 7, 2001, which recommended approval of the proposed development subject to the imposition of measures.⁶

The licence also previously underwent an amendment for the Jay Development, which required an Environmental Assessment by the Review Board. The Jay Report of Environmental Assessment was released on February 1, 2016, and included recommended Measures.⁷ The Applications for the Jay Development were subsequently updated, and the Jay Development proceeded through the permitting and licencing process, with an amended Licence and new Permit issued.

Amendments to the Licence to address activities for the Misery Underground, changes to potassium EQC, and the Lynx Project, also underwent preliminary screenings.^{8,9,10}

The Licence was most recently amended to include the Point Lake Development. This amendment underwent preliminary screening and the project changes associated with the Point Lake amendment were not referred to EA.¹¹ The Point Lake Development proceeded with the permitting and licencing process, with an amended Licence and new Permits issued.

The current Application includes proposed changes to the Project. Under Part 1, Schedule 1, section 2.1 of the Exemption List Regulations to the MVRMA, project areas and activities that have already been subject to Part 5 of the MVRMA are exempt from preliminary screening. The new Project activities/areas require screening by the Board in accordance with subsection 124(1) of the MVRMA.

In accordance with paragraph 125(1)(a) of the MVRMA, the Board must conduct a preliminary screening of the proposed changes to the Project to determine and report to the Review Board whether, in its

³ See WLWB Online Registry for [Ekati – Renewal – Engagement Record – Nov 1 22](#)

⁴ See WLWB Online Registry for [W2012L2-0001 – Ekati – Engagement Plan – Version 4.1 – Jul 27 18](#)

⁵ See WLWB Website for [LWB Engagement and Consultation Policy \(2023\)](#)

⁶ See Mackenzie Valley Review Board Registry for [Ekati – Sable, Pigeon, and Beartooth Pipes Expansion – EA99-004 - Report of Environmental Assessment](#)

⁷ See Review Board's Online Registry at www.reviewboard.ca for Jay Project Report of Environmental Assessment.

⁸ See WLWB Online Registry for [W2012L2-0001 – Ekati – WL Amendment – Misery UG – Preliminary Screening Determination – Nov 27 17](#)

⁹ See WLWB Online Registry for [W2012L2-0001 – Ekati – WL Amendment – Potassium EQC – Preliminary Screening Determination – Nov 27 17](#)

¹⁰ See WLWB Online Registry for [W2013L2-0001 W2013D0006 – Ekati Lynx Project – Preliminary Screening – Nov 22 13](#)

¹¹ See WLWB Online Registry for [Ekati – Point Lake Project – Preliminary Screening Determination and Reasons for Decision – Aug 24 21](#)

opinion, the proposed changes to the Project might have a significant adverse impact on the environment, or might be a cause of public concern. The details of the Board's analysis are set out in section [4.0](#) below.

3.1 Public Record and Regulatory Proceeding

To assist the Board in its preliminary screening determination for the Project, the Board distributed the Application and a draft Licence provided by Arctic for public review on November 8, 2022, inviting reviewers to provide comments and recommendations on the Applications and the preliminary screening (e.g., on impacts and mitigation measures) using the Online Review System (ORS). Comments were due December 15, 2022, with responses from the Applicant due January 12, 2023. The Board received comments and recommendations from the Tłıchq Government, Łutsël K'é Dene First Nation (LKDFN), Deninu Kų́ First Nation (DKFN), Yellowknives Dene First Nation (YKDFN), Environment and Climate Change Canada (ECCC), Fisheries and Oceans Canada (DFO), the Independent Environmental Monitoring Agency (IEMA), and the Government of Northwest Territories-Environment and Natural Resources (GNWT-ENR).¹² Board staff also submitted comments and questions for the purposes of clarification.

A request to extend the reviewer comment deadline to December 22, 2022 was made on November 18, 2022. The request was granted and the Applicant's response deadline was extended to January 19, 2023, and the Work Plan was adjusted accordingly.¹³ Since there were no further requests to extend the reviewer comment deadline, the Board is satisfied that a reasonable period of notice was given to affected communities and First Nations, as required by subsection 63(2) of the MVRMA. A notification about the Application was also distributed through News North NWT on November 14, 2022.¹⁴

The Board is also satisfied that notice of the Application was provided to the Tłıchq Government (TG) and that a reasonable period of time was provided for the Tłıchq Government to make representations to the Board in accordance with section 63 of the MVRMA.

The Board also provided notification to the Tłıchq Government on the Application in accordance with the MVRMA for a "major mining project," as defined in Chapter 23 of the Tłıchq Land Claims and Self-Government Agreement.¹⁵ Arctic and the Tłıchq Government submitted a joint letter on December 16, 2022 indicating that the two Parties were engaging on the matter, and would provide a more detailed response by January 31, 2023.¹⁶ On January 31, 2023, the Tłıchq Government and Arctic submitted a joint letter, indicating that given "the limited scope of the activities to be carried out pursuant to this application, our shared view is that this renewal application is covered by an existing agreement, and no further agreement is needed in relation to this specific renewal application. As such, the requirements of section 23.4.1 of the Tłıchq Agreement have been fulfilled."¹⁷

¹² See WLWB Online Review System for [Ekati – Licence Renewal Application – Item for Review](#)

¹³ See WLWB Online Review System for [Ekati – Renewal – Work Plan – Version 2 – Dec 5 22](#)

¹⁴ See WLWB Online Registry for [Ekati – Renewal – Newspaper Notice of Application – Nov 14 22](#)

¹⁵ See WLWB Online Registry for [Ekati – Renewal - Notice of Application for a Major Mining Project in Mųwhi Gogha Dē Njıłłēē – Nov 8 22](#)

¹⁶ See WLWB Online Registry for [Ekati – Renewal - Notice of Application for a Major Mining Project in Mųwhi Gogha Dē Njıłłēē – TG – Dec 16 22](#)

¹⁷ See WLWB Online Registry for [Ekati - Renewal - TG and Arctic letter RE 23.4.1 of Tłıchq Agreement - Feb 1 23](#)

3.2 Scope of Screening:

3.2.1 Previously Screened or Assessed Areas and Activities:

The Board recognizes that activities at the Ekati Mine have undergone numerous levels of environmental impact assessment over the years. The following is a list of activities included in the scope of the current Licence W2020L2-0004 and which do not require preliminary screening because the Board understands them to have been previously considered:

Mining Phase (operations):

- Diversion of water from Upper Panda Lake to Kodiak Lake
- Use of water and disposal of Waste for purpose of mining the Panda, Koala, Koala North, Misery, and Fox kimberlite purposes, for operating the processing facilities and related infrastructure, and carrying out Reclamation associated with diamond mining within the Koala, Misery, King-Cujo, Desperation-Carrie, and Lac du Sauvage Watersheds of the Lac de Gras basin, Northwest Territories
- Use water and Dewater Sable, Pigeon, and Beartooth Lakes for the purpose of mining
- Drawdown Two Rock Lake
- Divert Pigeon Stream around the Pigeon pit
- Pipe water from Bearclaw Lake outflow around Beartooth pit
- Deposit Processed Kimberlite into a Processed Kimberlite Containment Area for the purpose of creating a pit lake
- Dispose of waste for industrial undertakings in diamond mining and processing, production, Reclamation and associated uses in the Koala, Pigeon, and Sable watersheds, Northwest Territories
- Dewater Lynx Lake, use water, dispose of Waste, and divert runoff around the Lynx pit, for the purposes of mining the Lynx kimberlite pipe and carrying out Reclamation of the Lynx development
- Use water, dispose of Waste, and divert Groundwater inflows for the purposes of underground mining of the Misery kimberlite pipe and carrying out Reclamation of the Misery Underground Development, as described in the Application submitted August 15, 2017
- Dewater Point Lake, use water, and dispose of Waste for the purposes of mining the Point Lake, Phoenix and Challenge kimberlite pipes and carrying out Reclamation of the Point Lake Development

Post-Mining Phase (Closure and Reclamation):

- Removal of mining infrastructure; and
- Site-wide reclamation monitoring and reporting.

Water uses from Two Rock Lake, Grizzly Lake, Little Lake, Thinner Lake, Falcon Lake, and Lac de Gras included in the list above were previously screened for maximum annual quantities as outlined in Part D, Condition 2 of Licence W2020L2-0004, and one time water withdrawals from Point Lake, Sable Lake, and Pigeon Pond were also screened for maximum quantities as outlined in Part D, Condition 3.

In its Application, Arctic outlined information supporting its assessment that a number of proposed water uses are exempt from Preliminary Screening because they were previously considered with other environmental impact assessments and preliminary screenings. As described below, this includes water uses for the Sable, Pigeon, and Beartooth Project, and for the Jay Project. In both cases, it was determined that there was either: no public concern and that there would be no significant adverse impacts to the environment; or that measures could be put in place to mitigate environmental impacts and/or public concern.

Sable, Pigeon, and Beartooth Project:¹⁸

Arctic has proposed including water use from Upper Exeter and Ursula Lakes (22.0 Mm³ and 50.6 Mm³, respectively) for reclamation of Pigeon and Sable Open Pits and operational purposes. In its Application, Arctic outlined that water use from Upper Exeter and Ursula Lakes was assessed as part of the Review Board's assessment of the Sable, Pigeon, and Beartooth Project. In the Report of Environmental Assessment, the Review Board's conclusion was that using the proposed withdrawal volumes, "for the refilling of the Sable and Pigeon Pits with water [...] would not cause a significant adverse impact on the environment."¹⁹ As this water use has been previously screened, the Board agrees that it is exempt from Preliminary Screening.

Jay Project:²⁰

Arctic has proposed including water use from Lac du Sauvage (33.35 Mm³) for the purposes of backflooding Point Lake and operations. In its Application, Arctic outlined that water use from Lac du Sauvage was assessed as part of the Review Board's assessment of the Jay Project, with the Review Board recommending that the Project be approved subject to the implementation of measures to prevent significant adverse impacts on the environment. These measures included Measure 4-2a for a Site Water Management Plan and Measure 5-1 for Protection of the Narrows. As part of the Preliminary Screening decision on the Point Lake Amendment, the Board had considered what relevant EA Measures for the Jay Project had been completed or were being carried forward. In that decision, the Board noted it was of the understanding that Jay Measures continued to apply.²¹ Arctic noted in the Application that these relevant measures were addressed through the commitment to achieve Board-approved closure objectives during closure of the Point Lake Project; the Point Lake Dewatering Plan; the future update to the Wastewater and Processed Kimberlite Management Plan; future updates to the Interim Closure and Reclamation Plan, and the future Point Lake Open Pit Back-flooding Plan. The Board is of the opinion that Arctic's Application clearly indicates how the appropriate Jay Measures are being implemented for this water use, and given the previous Environmental Assessment, agrees that it is exempt from Preliminary Screening.

¹⁸ See Mackenzie Valley Review Board Registry for [Ekati – Sable, Pigeon, and Beartooth Pipes Expansion – EA99-004](#)

¹⁹ See Mackenzie Valley Review Board Registry for [Ekati – Sable, Pigeon, and Beartooth Pipes Expansion – EA99-004 - Report of Environmental Assessment](#)

²⁰ See Mackenzie Valley Review Board Registry for [Ekati – Jay Project – EA1314-01](#)

²¹ See WLWB Online Registry for [Ekati – Point Lake Project – Preliminary Screening Determination and Reasons for Decision – Aug 24, 21](#)

3.2.2 New Areas and Activities:

New areas and activities have been proposed in the Application as discussed below.

Lac de Gras Water Use

The following proposed water use from Lac de Gras during Operations includes:

- 2.0 M m³ for contingency pumping to the Lynx Open Pit for the underwater remote mining (URM) trial; and
- 200,000 m³/year of pumping to Connor Lake for fisheries-related flow augmentation.

The screening of this water use is addressed further in Section 4 and Table 1 of this Reasons for Decision.

The Board notes that the water use volumes applied for and proposed for operational and reclamation purposes are those that have been considered in this Preliminary Screening. In Arctic's response to WLWB staff comment 2, Arctic outlined "proposed water withdrawals" from Upper Exeter Lake, Lac de Gras, Ursula Lake, and Lac du Sauvage. These proposed water withdrawals aligned with those included in the Application. The exemptions for Preliminary Screening as outlined in section 3.2.1 for Upper Exeter, Lac du Sauvage, and Ursula Lakes also align with the "proposed water withdrawals" included in the Application. In response to WLWB staff comment 2, Arctic also provided "conceptual" volumes for future back-flooding, but did not request that they be considered as part of this Application. As such, the Board did not consider the "conceptual" volumes in this Preliminary Screening. **If Arctic were to require additional water volumes beyond what has been applied for, these additional volumes would need to be subject to Part 5 of the MVRMA.**

Underwater Remote Mining Trial at Lynx Pit

The Lynx Open Pit Underwater Remote Mining trial, includes the use of an underwater crawler and pumping system for removal of kimberlite ore, dewatering of kimberlite cuttings, and hauling of kimberlite to the process plant. In its Application, Arctic suggested that the proposed Underwater Remote mining (URM) trial at Lynx Pit was a minor continuation of open-pit mining in the Lynx Open Pit and is a "beneficial activity that has negligible environmental risk and the potential to generate information that leads to increased mine life and extended socio-economic benefits. As such, the Lynx URM trial does not require Preliminary Screening."

In its review, IEMA did not agree that the use of Underwater Remote Mining (URM) technology is exempt from preliminary screening. Specifically, IEMA noted that it is a new technology, and as such cannot be considered exempt and needs to be screened (IEMA comment 2). The Tłıchǵ Government also commented that (comment 26), "conclusions about the insignificance of impacts may result in a straightforward preliminary screening, but DO NOT in and of themselves mean that a screening is not required."

As part of this screening determination, the Board considered if the URM trial at Lynx Pit was exempt from Preliminary Screening as posited by Arctic. As noted by IEMA (IEMA comment 2), this is a new technology for use in mining in the Northwest Territories. The Review Board's Preliminary Screening Guidelines note that "projects applying new or unproven technologies are more likely to be subject to a higher level of scrutiny."²² The Board is of the opinion that while URM could be considered an extension of open pit mining, this is a new technology that has not been tested at the Ekati mine site, and as such it is appropriate to conduct preliminary screening of this new activity and evaluate if there are new impacts to consider and/or potential impacts not yet mitigated. The screening is discussed further in Table 1 and Section 4.1.1.

In the Application, Arctic only included information regarding a trial of Underwater Remote Mining at Lynx Pit. In response to YKDFN comment 5, Arctic also noted that possible future commercial applications of URM at the Ekati Mine would undergo appropriate "permitting processes." **Use of URM beyond this trial at Lynx Pit will require further screening, permitting, and licencing.**

4.0 Potential Impacts and Proposed Mitigations

Table 1 below summarizes:

- the potential impacts of the proposed changes to the Project;
- the concerns that were identified during the regulatory proceeding and how the Applicant addressed those concerns;
- the proposed and potential mitigations for the potential impacts; and
- the Board's analysis of the potential impacts and proposed mitigations.

²² See Review Board website for [Guideline for Preliminary Screeners 2022](#)

Table 1: Potential Impacts and Proposed Mitigations for the Proposed Changes to the Project

Potential Impact	Activity	Proposed Mitigations <i>Description of measures to reduce potential impacts, including consideration of cumulative impacts and climate change.</i>	Board Analysis and Determination
Water table alteration; water availability (DKFN comment 1; TG comments 12, 13, 14, and 15; YKDFN comment 5; WLWB staff comment 2)	Water use for Lynx URM Trial; Water use from Lac de Gras for operations and reclamation contingencies in Lynx Open Pit and Connor Lake flow augmentation	<p>The Applicant noted the following in its Application:</p> <ul style="list-style-type: none"> Lac de Gras has an estimate recharge rate of 505 Mm³ per year. If the proposed withdrawal volume of 2.0 Mm³ was withdrawn within a single year, it represents 0.4% of the annual recharge, which represents a negligible potential environmental effect. <p>The Applicant described the following mitigations and considerations in response to Review Comments:</p> <ul style="list-style-type: none"> The Protection of source lakes using Board-approved Drawdown or Backflooding Plans required by the Licence. These Plans will describe pumping plans that protect source lakes, include monitoring and adaptive management, and use additional monitoring information collected since 2000 to inform pumping plans. There is a schedule for Drawdown Plans in the current Licence (W2020L2-0004), and Arctic has proposed a schedule for Backflooding Plans with the draft Licence in its Application; Backflooding or Drawdown Plans will describe multi-year pumping programs where appropriate; Backflooding/Drawdown Plans will define operational details and detailed scheduling that aligns with as-built conditions, final evaluations of source lake capacity, and other site-specific considerations; and While water use from Lac de Gras at Ekati may happen simultaneously with water use from Lac de Gras by the Diavik Mine, Arctic's use would be a minor component of the 	<p>Drawdown and Backflooding Plans for Board approval are requirements of the current Licence and could be applied to the new proposed water uses described in the Application. The requirement for submission of these Board-approved Plans would ensure Parties have input into water use details</p> <p>The proposed water use volume from Lac de Gras is also minor compared with the total lake volume and recharge rate, and the overall potential impact is negligible.</p> <p>Based on the described mitigations and considerations, it is the Board's opinion that the proposed activities will not have a significant adverse impact on the environment and will not be a cause of public concern.</p>

		<p>combined water withdrawal and would not represent a negative impact on the lake; 2 Mm³ of water is a minor quantity relative to the size of the lake.</p> <p>The Board has a standard licence condition that is typically used to mitigate the identified potential impacts. The standard condition is:</p> <ul style="list-style-type: none"> • Water Source and Maximum Volume 	
<p>Fish and Fish habitat; impacts to the narrows between Lac du Sauvage and Lac de Gras (DFO comments 1 and 2)</p>	<p>Water use from Lac de Gras/Lac du Sauvage Watershed; backflooding of Misery Pit</p>	<p>The Applicant proposed the following in Response to Review Comments:</p> <ul style="list-style-type: none"> • Withdrawal rates will be protective of fish and fish habitat, and will be proposed in Drawdown/Backflooding Plans for Board approval. Arctic will engage with DFO during development of each Drawdown or Backflooding Plan that utilizes a natural source lake to discuss and evaluate potential impacts to fish and fish habitat; and • Arctic recommends Schedule 3, Condition 2 of the Licence include: for open pits flooded from Lac du Sauvage, the Backflooding Plan shall include a description of adaptive management to protect fish habitat in the Narrows between Lac du Sauvage and Lac de Gras. 	<p>The Board is of the opinion that Board-approval of Drawdown/Backflooding plans and adaptive management are suitable mitigations for potential environmental impacts from this water use.</p> <p>Based on the described mitigations, it is the Board's opinion that the proposed activities will not have a significant adverse impact on the environment and will not be a cause of public concern.</p>

Soil Contamination (identified by Arctic)	On-site fuel storage and handling for Lynx URM Trial	<p>The Applicant proposed the following in a general response to Review Comments:</p> <ul style="list-style-type: none"> On-site fuel storage for on-site generators will adhere to Land Use Permit Conditions and be contained within double-walled tanks and/or secondary containment; Fuel storage, transfer, and handling will occur within the catchment area of the open pit (no Discharge to the environment); and Spills will be cleaned up and reported according to the Land Use Permit and approved Spill Contingency Plan (SCP). <p>There is an existing Land Use Permit (i.e., W2021D0002)²³ for the Lynx Open Pit and it includes the following conditions for mitigating potential impacts related to fuel storage and handling:</p> <ul style="list-style-type: none"> Chemicals; Report Spills; Waste Petroleum Disposal; Waste Management; Repair Leaks; Fuel Storage Setback; Fuel Cache Secondary Containment; Secondary Containment-Refueling; Fuel Container Stands; Fuel Containment; Mark Containers; Mark Fuel Location; Report Fuel Location; Seal Outlet; Spill Contingency Plan; Spill Response; Drip Trays; and Clean Up Spills 	<p>Similar operations already occur at the Ekati site and are managed through existing plans and management practices.</p> <p>Based on the described mitigations, it is the Board's opinion that the proposed activities will not have a significant adverse impact on the environment and will not be a cause of public concern.</p>
Changes in water quality (DKFN comment 2; LKDFN comment 7; TG comment 19; YKDFN comment 5)	Lynx URM Trial mining operation and water use	<p>The Applicant proposed the following in response to Review Comments:</p> <ul style="list-style-type: none"> There will be monitoring of open pit water before, during, and following the URM trial at Lynx; This is a defined scope trial using an open pit method contained in the Lynx Open Pit catchment area. There are no minewater releases and any future applications of URM would undergo appropriate permitting processes; and With respect to concern raised about suspended sediments from the URM, the dewatering system for kimberlite cuttings mixed with open pit water is designed to capture over 99% of the 	<p>The trial is of a limited size and scope, and there are mechanisms in place to minimize water quality impacts. Closure objectives for the pit water quality are also in place. See subsection 4.1.1 of these Reasons for Decision for further discussion.</p> <p>Based on the described mitigations, it is the Board's opinion that the proposed activities will not have a significant adverse impact on</p>

²³ See the WLWB Online Registry for [Ekati – Lynx Development – Land Use Permit and Reasons for Decision – Apr 15 21](#)

		<p>kimberlite particles.</p> <p>The Board has identified existing Conditions in Licence W2022L2-0004²⁴ which would represent mitigations of potential impacts to water quality from the implementation of URM:</p> <ul style="list-style-type: none"> • Effluent Quality Criteria (Part H, Condition 15) • Aquatic Effects Monitoring Program (Part J, Condition 1); and • Surveillance Network Program (Annex B) <p>The Board also notes that the approved Closure Objectives in the Interim Closure and Reclamation Plan for Ekati include Open Pit Objectives requiring water quality be safe for people, wildlife, and aquatic life (OP-1)²⁵; Arctic is required to ensure the Lynx Pit water quality is safe at closure.</p>	the environment and will not be a cause of public concern.
Air quality - Increased greenhouse gases (identified by Arctic)	Lynx URM Trial	<p>The Applicant provided the following information in a general response to Review Comments:</p> <ul style="list-style-type: none"> • Greenhouse gas (GHG) emissions from the trial due to on-site generators and kimberlite haulage are minor and short-lived relative to on-going operations; emissions are less than that which would result from mining of additional kimberlite using truck-and-shovel methods. 	Arctic has provided appropriate rationale for why this potential impact does not require new mitigations and that the scale of potential impacts is not anticipated to be greater than previously considered impacts. Thus, it is the Board's opinion that the proposed activities will not have a significant adverse impact on the environment and will not be a cause of public concern.
Air quality – increased dust generation (identified by	Lynx URM Trial – kimberlite hauling	In a general response to Review Comments, the Applicant indicated that dust generated from kimberlite hauling to process plant is minor and short-lived relative to on-going Ekati Mine operations. The Applicant also proposed the following mitigation:	Arctic has provided appropriate rationale for why this potential impact does not require

²⁴ See WLWB Online Registry for [Ekati – Water Licence – Jun 27 22](#)

²⁵ See WLWB Online Registry for [W2012L2-0001 – Ekati – ICRP – Proposed Closure Objectives – Reasons for Decision – Jul 23 21](#)

Arctic)		<ul style="list-style-type: none"> Dust generated from roads will be managed with on-going and established dust suppression programs. 	new mitigations and that the scale of potential impacts is not anticipated to be greater than previously considered impacts. Thus, it is the Board's opinion that the proposed activities will not have a significant adverse impact on the environment and will not be a cause of public concern.
Vegetation impacts – direct loss of vegetation; introduction of non-native species; effects on plant health (identified by Arctic)	Lynx URM Trial – expansion of Utility pad	<p>The Applicant proposed the following in a general response to Review Comments:</p> <ul style="list-style-type: none"> Area of enlargement of the Utility Pad is within the location and size of the initially authorized pad; The Utility Pad will be reclaimed according to the approved Closure and Reclamation Plan; The trial may lead to implementation of an open pit mining method that reduces dust and other potentially harmful substances compared to truck-and-shovel methods; Dust and other substances released through the trial are minor and short-lived compared to ongoing Ekati Mine operations; and Mitigation of dust generated from road activities (hauling) through on-going and established programs for dust suppression. 	Arctic has provided appropriate rationale for why this potential impact does not require new mitigations and that the scale of potential impacts is not anticipated to be greater than previously considered impacts. Thus, it is the Board's opinion that the proposed activities will not have a significant adverse impact on the environment and will not be a cause of public concern.
Terrestrial wildlife habitat impacts – direct loss or removal of habitat, dens, or nests; direct injury or mortality; human-wildlife conflicts; impacts to	Lynx URM Trial	<p>The Applicant proposed the following in a general response to Review Comments:</p> <ul style="list-style-type: none"> The area of enlargement of utility pad at Lynx Pit is minor and does not affect unique or special habitat, and the pad will be reclaimed according to the approved Closure and Reclamation Plan; The trial is occurring within the already developed area of the Lynx Open Pit with negligible risk of direct injury or mortality of terrestrial wildlife or human-wildlife conflict; risks associated with haulage of kimberlite to the process plant are mitigated through the Wildlife Effects Monitoring Program 	Arctic has provided appropriate rationale for why this potential impact does not require new mitigations and that the scale of potential impacts is not anticipated to be greater than previously considered impacts. Thus, it is the Board's opinion that the proposed activities will not have a significant adverse impact on the environment and will not be a cause of public concern.

raptors or migratory birds (identified by Arctic)		<p>(WEMP) and Caribou Road Mitigation Plan and there are operational safety procedures in place site-wide;</p> <ul style="list-style-type: none"> The use of Lynx Open Pit by raptors or migratory birds has not been observed to date and as such the trial does not represent a risk in this regard. 	
Wildlife harvesting (identified by Arctic)	Lynx URM Trial	<p>The Applicant proposed the following in a general response to Review Comments:</p> <ul style="list-style-type: none"> The trial is within the disturbed area of the Lynx Open Pit and does not represent a risk to traditional land use, subsistence, and harvesting rights; Equipment will be removed and the Utility Pad will be reclaimed according to the approved Closure and Reclamation Plan. 	<p>Arctic has provided appropriate rationale for why this potential impact does not require new mitigations and that the scale of potential impacts is not anticipated to be greater than previously considered impacts. Thus, it is the Board's opinion that the proposed activities will not have a significant adverse impact on the environment and will not be a cause of public concern.</p>
Change to or loss of heritage resource (identified by Arctic)	Lynx URM Trial	<p>The Applicant proposed the following in a general response to Review Comments:</p> <ul style="list-style-type: none"> The trial is within the disturbed area of the Lynx open Pit which has undergone archaeological survey with no heritage or archaeological sites identified. 	<p>Arctic has provided appropriate rationale for why this potential impact does not require new mitigations and that the scale of potential impacts is not anticipated to be greater than previously considered impacts. Thus, it is the Board's opinion that the proposed activities will not have a significant adverse impact on the environment and will not be a cause of public concern.</p>
Impairment of recreational or traditional uses of the land or air; impairment of the aesthetic	Lynx URM Trial	<p>The Applicant proposed the following in a general response to Review Comments:</p> <ul style="list-style-type: none"> The trial is within the disturbed area of the Lynx Open Pit and the Utility Pad will be reclaimed according to the approved Closure and Reclamation Plan. 	<p>Arctic has provided appropriate rationale for why this potential impact does not require new mitigations and that the scale of potential impacts is not anticipated to be greater than previously considered impacts. Thus, it is the Board's opinion that the</p>

quality of the land or water (identified by Arctic)			proposed activities will not have a significant adverse impact on the environment and will not be a cause of public concern.
Social and economic benefits (identified by Arctic)	Lynx URM Trial	<p>The Applicant noted the following in a general response to Review Comments:</p> <ul style="list-style-type: none"> The trial may lead to implementation of an open pit mining method that extends the operating life of the Ekati Diamond Mine, and thereby, extends social and economic benefits. 	Based on Arctic's response, it is the Board's opinion that the proposed activities will not have a significant adverse impact on the environment and will not be a cause of public concern.

4.1 Consideration of Potential Impacts

Based on the potential impacts and proposed mitigations identified above in Table 1, the Board considered whether the changes to the Project might have a significant adverse impact on the environment. More detailed consideration of specific potential impacts and associated mitigations related to the Underwater Remote Mining trial at Lynx Pit is discussed below in subsection 4.1.1. In general, impacts of the changes to the Project on the environment can be mitigated through the use of licence conditions of two general types:

1. conditions in the existing Licence, including requirements for management and monitoring plans, with revisions where necessary; and
2. new or unique conditions that may be needed to mitigate potential impacts of the changes to the Project that may not be addressed by the conditions in the existing Licence, and which may be from the Board's standard conditions list or established by the Board as per the MVLWB [Standard Process for Creating New Conditions](#).

These conditions may include requirements for management and monitoring plans that provide detailed information regarding the implementation of mitigation measures and the evaluation of their effectiveness.

The Tłı̨chǫ Government recommended that an Environmental Assessment was not needed, and the licence renewal process could continue (TG comment 27). It was noted that potential impacts from changes in water use and the URM trial could be managed through use or adaptation of tools and/or plans in the Licence and could be further discussed through the proceeding (TG comments 28 and 29). IEMA also recommended that the proposed changes were unlikely to cause significant adverse impacts on the environment and could be addressed and mitigated through the proceeding (IEMA comment 2). Potential conditions will be discussed in further detail by all Parties through the regulatory proceeding and will be finalized by the Board following completion of the regulatory proceeding.

4.1.1 Underwater Remote Mining Trial at Lynx Pit

Table 1 outlined the potential impacts of the URM trial at Lynx Pit. Arctic provided a detailed assessment of the potential impacts and mitigations in a general response to review comments. The majority of the potential impacts are comparable to those associated with typical open pit mining, which have been previously screened for traditional mining activities at the Ekati mine. These include impacts associated with fuel storage and handling, greenhouse gas emissions, dust generation, vegetation impacts, and wildlife interactions. In general, the scale of the potential impacts is expected to be smaller than those associated with traditional open pit mining methods and the activities will be conducted in already disturbed areas. Furthermore, these potential impacts already have mitigations in place, such as a Spill Contingency Plan, existing Permit and Licence conditions, dust suppression programs, closure requirements, and existing Wildlife Effects Monitoring Program and Caribou Road Mitigation Plan.

The Lynx URM Trial would allow for Arctic to conduct mining underwater. The potential impacts of this practice have not been considered before by the Board, including potential for water quality changes in

Lynx Pit during operations and at closure. However, as addressed in Table 1, the Board is of the opinion that mitigations are available including but not limited to: discussion of applicable Effluent Quality Criteria; the Surveillance Network Program; Aquatic Effects Monitoring Program; and confirmation of how Lynx Pit water will meet Closure Objectives. Arctic has also noted that the dewatering system for kimberlite cuttings mixed with open pit water is designed to capture over 99% of kimberlite particles. The Board is of the opinion that further discussion of how Arctic will ensure water quality at Lynx Pit will not be impacted through use of URM is best approached through further discussions, such as the Technical Session and Public Hearing.

4.2 Consideration of Public Concern

In addition to considering the potential impacts of the changes to the Project, the Board considered whether the changes to the Project might be a cause of public concern. IEMA commented that the proposed changes were unlikely to be a cause of public concern (IEMA comment 2).

YKDFN commented that it believes it was unable to make an informed decision on whether the URM would have negative impacts to the environment, rights, and title, noting that no empirical data on the technology or its impacts on a northern environment were available (YKDFN comment 1). YKDFN recommended Arctic provide additional information and indicate how a decision could be made about the trial without being referred to EA. Arctic responded with a detailed Project Description, describing the mitigations available for the activities of the trial; the mitigations proposed by Arctic have been incorporated into Table 1 above. Arctic also highlighted that the trial would not involve minewater releases and could lead to the implementation of an open pit mining method with reduced environmental effects. As noted above, this is a trial with limited scope, and any further use of the technology in other locations would need to undergo similar licencing and/or permitting processes. The Board is of the opinion that Arctic has provided information to address YKDFN's questions, and most mitigations are already in place, with fewer anticipated impacts from URM than typical open-pit mining. The Board is of the opinion that concerns can be managed through the use of conditions appropriate to the project. YKDFN's concerns appear to primarily be with respect to potential environmental impacts. As discussed above, no significant impacts to the environment have been identified so far in the proceeding.

Based on the evidence provided during the regulatory proceeding thus far, the Board did not identify any comments or issues that indicate that the Project is a cause of public concern.

5.0 Conclusion

The Board and Mackenzie Valley Environmental Impact Review Board (the Review Board) have previously completed preliminary screenings and Environmental Assessments of the Project. However, the Application includes proposed changes to the Project. Accordingly, the Board has determined that Project activities that have already been subject to Part 5 of the MVRMA are exempt from preliminary screening under Part 1, Schedule 1, section 2.1 of the Exemption List Regulations to the MVRMA. The Board has conducted a preliminary screening of the proposed changes to the Project.

The Board has reviewed all the evidence received during the regulatory process with respect to the Preliminary Screening of the proposed changes to the Project. Based on the evidence, it is the Board's opinion that the proposed changes to the Project will not have a significant adverse impact on the environment or be a cause of public concern as set out in paragraph 125(1)(a) of the MVRMA. The Board has therefore decided not to refer the proposed changes to the Project to Environmental Assessment and will resume the regulatory proceeding.



Mason Mantla, Chair
Wek'èezhìi Land and Water Board

February 22, 2023

Date