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May 2, 2024

File: MV2023L8-0015
MV2023X0039

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: Government of the Northwest Territories – Department of Infrastructure – Notice of Preliminary Screening Determination – Applications for Land Use Permit and Water Licence – Miscellaneous – Redknife River, NT

The Mackenzie Valley Land and Water Board (Board) met on April 25, 2024 and considered the Application Packages from Government of the Northwest Territories – Department of Infrastructure (GNWT – INF) for Land Use Permit (Permit) MV2023X0039 and Water Licence (Licence) MV2023L8-0015 for the Redknife River Culvert Removal and Bridge Installation (Project) 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 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 can proceed with issuance of Permit MV2023X0039 and Licence MV2023L8-0015 on **Monday, May 13, 2024**

The Board and staff look forward to continued communications throughout the pause period. Please contact Kathy Racher via [email](#) or at (867) 766-7657 with any questions or concerns regarding this letter.

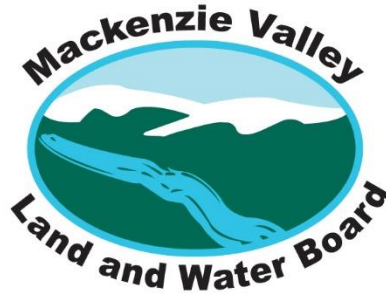
Yours sincerely,

A handwritten signature in blue ink that reads "Tanya MacIntosh". The signature is written in a cursive style with a long horizontal stroke at the beginning.

Tanya MacIntosh
Chair, Mackenzie Valley Land and Water Board

BCC'd to: Dehcho Distribution List
 Mahabub Rahman – GNWT-INF
 Alexis Campbell – GNWT-INF
 Erica Bonhomme – Stantec
 Sarah Jones – Stantec
 David MacLaggan – Stantec

Attached: Preliminary Screening Determination and Reasons for Decision



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Preliminary Screening Determination and Reasons for Decision

Water Licence and Land Use Permit Applications	
File Number	MV2023X0039 & MV2023L8-0015
Company	Government of the Northwest Territories – Department of Infrastructure
Project	Redknife River Bridge Project
Location	Redknife River, NT
Activity	Miscellaneous
Date of Decision	April 25, 2024

1.0 Decision

In accordance with subsection 124(1) of the [Mackenzie Valley Resource Management Act](#) (MVRMA), the Mackenzie Valley Land and Water Board (MVLWB or Board) met on April 25, 2024 to make a preliminary screening determination on the Applications from Government of the Northwest Territories – Department of Infrastructure (GNWT-INF)(Applicant) for Land Use Permit MV2023X0039 (Permit)¹ and Water Licence MV2023L8-0015 (Licence)² for the Redknife River Project (Project).³

The Board has decided not to refer the proposed 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 Project will not have a significant adverse impact on the environment or be a cause of public concern.

¹See MVLWB Online Registry www.mvlwb.com for GNWT – INF – [Permit Application – Dec29 23](#)

² See MVLWB Online Registry GNWT – INF – [Licence Application – Dec29 23](#)

³ The Project is the Redknife River Project, which is the proposed development, where “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 Board’s determinations, including reasons for its decision, are detailed in sections [3.0](#) and [4.0](#).

2.0 List of Defined Terms and Acronyms

Applicant	Government of the Northwest Territories – Department of Infrastructure
Applications	The complete application package submitted by the Applicant for Water Licence MV2023L8-0015 and Land Use Permit MV2023X0039.
Board	Mackenzie Valley and Water Board
CRP	Closure and Reclamation Plan
EA	Environmental Assessment
GNWT	Government of the Northwest Territories
GNWT-ECC	Government of the Northwest Territories – Environment and Climate Change
MVLWB	Mackenzie Valley Land and Water Board
MVRMA	Mackenzie Valley Resource Management Act
Minister	Minister of the Government of the Northwest Territories – Environment and Climate Change
ORS	Online Review System (www.new.onlinereviewsystem.ca)
PA	Project Area
Party	As per the LWB Rules of Procedure , an applicant, a person, or an organization participating in the regulatory proceeding for the Applications.
Project	Miscellaneous, which is the proposed development (as defined in Part 5 of the MVRMA). ⁴
Review Board	Mackenzie Valley Environmental Impact Review Board
SCP	Spill Contingency Plan
Standard Licence Conditions	LWB Standard Water Licence Conditions Template
Standard Permit Conditions	LWB Standard Land Use Permit Conditions Template
TK	Traditional Knowledge
WMP	Waste Management Plan

3.0 Background and Scope of Screening

On December 29, 2023, GNWT-INF submitted an application for the replacement of an existing crossing of the Redknife River at km 295.2 of Highway No. 1 between Enterprise and Fort Simpson. The existing crossing was constructed in 1971 and consists of three large diameter culverts. These create a barrier to migrating fish as they are perched during certain times of the year, and flow velocities are too high at other times of the year. The Department of Fisheries and Oceans Canada (DFO) has indicated that the existing crossing should be replaced.

⁴ “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.”

An Engagement Record and Engagement Plan were included in the Application. GNWT-INF noted they engaged with the following Parties: Wrigley

- Village of Fort Simpson
- Jean Marie River
- Nahanni Butte
- Fort Liard
- Dehcho First Nation
- Acho Dene Koe First Nation
- Fort Simpson Métis Local #52
- Ttsetsekehdeli First Nation
- Łíídlı́ Kúé First Nation
- Pehdzéh Kí First Nation
- Naha Dehe Dene Band

GNWT-INF held one-on-one meetings as well as community meetings. These meetings started in March of 2023 and concluded with a project update letter sent to all parties in early December 2023.

In accordance with paragraph 125(1)(a) of the [MVRMA](#), the Board must conduct a preliminary screening of the proposed Project to determine and report to the Review Board whether, in its opinion, the proposed 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 Scope of Screening:

New Areas and Activities

The Project will replace the existing culvert crossing with a clear span bridge across the channel, thereby re-establishing fish passage and fish habitat connectivity within the Redknife River. Funding for the Project is related to the DFO Fisheries Act Authorization (Authorization) 03-HCAA-CA6-0057.1 for De Beers Canada Inc. as part of their work in and around Kennady Lake, NWT (known as offsetting where a project can harm habitat in one area if they repair habitat in another). The Authorization calls for a Letter of Credit that can be in part used for offsetting measures such as the construction of a crossing at the Redknife River to re-establish upstream fish passage for migratory species, by December 31, 2025.

The Project includes the following physical works and activities:

- Construction of a clear span bridge across the Redknife River channel 16 metres (m) north of the current highway alignment centerline;
- Removal of the existing crossing, culverts, and fill, and reconstruction and protection of the banks of the Redknife River to correspond with the new crossing;
- Construction of fill approaches to the new bridge to meet highway standards;
- Construction and operation of temporary facilities to service the Project such as access, laydown areas, construction camp, fuel storage, equipment maintenance and storage areas, water supply, power generation, and waste management;
- Vehicle and equipment movement to the construction Site and between the Site and existing quarry locations;

- The Project will obtain rock and granular material from two existing quarries authorized for use by GNWT-INF at Highway No.1 KM 242.5 and KM 260.0, therefore quarrying is not within the scope of the Project presented in this report; and
- The operations and maintenance of Highway No.1, which will include the new bridge as constructed, is permitted under MV2023E0012, and is also not included within the scope of the Project.

Materials and equipment needed for the Project will be transported to the project area via Highway No.1. Materials such as bridge components, construction materials and fuel, and mobile equipment will be stored temporarily along the edges of the highway Right of Way and within the laydown and storage areas. Likewise, materials removed during the demolition of the existing crossing will be temporarily stored in these areas prior to removal from the site and final disposal.

Temporary laydown and storage areas will be established within existing cleared areas that were previously borrow sources, located approximately 750 m southwest and 900 m southeast of the bridge crossing and accessed from Highway No.1.

A temporary work camp for accommodation of up to approximately 35 workers will be established within one of the laydown and storage areas. The camp will be operated year-round for approximately 12-18 months. The temporary camp will be constructed with suitable infrastructure to meet the Worker Safety and Compensation Commission's Camp Set Up and Management Code of Practice (WSSC 2017).

Water for camp use (washing, cooking, sanitation) will be sourced from the Redknife River during summer months (May to October), or as flow conditions allow. Potable water will be sourced from Checkpoint Station, the Village of Fort Simpson, or Enterprise. Sewage may be treated and disposed of on-site upon meeting discharge criteria, or stored in a holding tank for removal pump truck for disposal at the Fort Simpson sewage lagoon. Greywater may be stored in an excavated sump or stored in a tank for future removal from the camp by truck for disposal at the Fort Simpson lagoon. If a sump is used, a coarse filter will be used to remove food particles prior to discharge. Coarse gravel would be placed in the bottom and sides to provide filtration and stabilize the sides. The sump would be of sufficient size to store expected greywater volumes and would be located on mineral soil. Operators would inspect the greywater sump regularly. When full, the greywater sump would be covered with enough material to allow for future ground settlement.

A traffic control plan will be established to detour public traffic on Highway No.1 to one side of the existing road alignment and existing crossing, providing for one lane alternating traffic on Highway No.1 during construction of the Project. No temporary crossing structures will be required to cross the Redknife River.

Approximately 2.63 ha will be required for the bridge and road alignment, including workspace. An additional 2.43 ha will accommodate laydown and storage areas, including temporary workcamp, for a total new area to be cleared of 5.06 ha.

Clearing the bridge and road alignment and workspace areas will be completed using saws, excavators and mulchers. Salvageable timber (greater than 10-centimetre diameter) will be cut and piled for community use. Remaining brush and trees will be mulched and spread along the edges of the ROW and cleared areas more than 30 m from the river.

The construction of bridge abutment foundations will involve excavation, installation of steel piles, and concrete placement to create two onshore concrete abutments. These will be backfilled with granular material, and will have slope erosion protection. These will be setback approximately 15 m from the shoreline. Construction of bridge abutment foundations will not require in-stream work.

The bridge superstructure will be a single-span bridge design and will be approximately 70 m long. The underside of the bridge girders will be 7.3 m above the water level of the Redknife River (1:2 year flow). At high water (1:100 year flow), there will be 5.4 m clearance between the water and the bridge. Construction of the bridge superstructure will not require in-stream work.

Alignment of the new roadway will require excavation and fill. The new alignment will be built approximately 16 m to the north of the existing alignment, and will re-align the existing highway over a length of approximately 580 m in total.

Fill to the bridge abutments will be constructed and riprap will be installed to protect the banks of the Redknife River from erosion. Abutment backfilling and riprap installation will require in-stream work and temporary isolation of work areas within the Redknife River to divert flow to complete construction activities.

Existing culverts will be removed once the new bridge is in place as it will complete the final channel profile at the impacted location. Removal of culverts will require temporarily diverting a portion of the flow of the Redknife River into one or two culverts during low flow to isolate other culverts to be removed. Once the work area is isolated, the isolated culvert(s) will be removed. This process will be repeated until all three culverts are removed.

The contractor for the Project will select the types of fuels and fuel storage tanks to meet the needs of the Project as well as any storage tank volumes and locations, in accordance with permit requirements and applicable guidelines. The GNWT-INF expects that diesel and gasoline will be the two primary fuels used. Diesel will be used in the mobile equipment and vehicles and for power generation at the camp. Fuel will be stored in stationary fuel tanks for heating and powering the work camp and for vehicle refueling; tidy tanks for refueling mobile equipment and vehicles; and a fuel truck for refueling the stationary tanks.

Mobile and stationary tanks used for the project will meet regulatory requirements for secondary containment. Fuel storage and refueling will occur more than 100 m away from the ordinary highwater mark of any watercourse.

The selected construction contractor will be required to secure agreement for the disposal of solid waste and wastewater from the Project at municipal facilities in Fort Simpson. Approval for wastewater and solid waste disposal will be provided prior to the start of construction.

Waste produced will be managed in accordance with the Waste Management Plan (WMP). The primary waste management methods are described below:

- Non-hazardous solid waste will be disposed of at the Village of Fort Simpson solid waste facility;
- Camp sewage and greywater will be disposed of in the sewage lagoon in the Village of Fort Simpson; Hazardous waste will be transferred to an approved hazardous waste management facility
- Wastes suitable for incineration, such as food-contaminated wastes, cardboard may be incinerated on site;
- Trees and brush cleared will be mulched or windrowed and compacted by heavy equipment along the side of the cleared area. Trees of salvageable size will be piled and left in an accessible area for community use;
- Road cut material that is unsuitable for construction will be spread on the locations of the laydowns/camp sites; and
- Inert waste such as metal and concrete will be backhauled by vehicle for final disposal at an approved waste facility.

3.2 Public Record and Regulatory Proceeding

To assist the Board in its preliminary screening determination for the Project, the Board distributed the Applications and a draft Licence and Permit for public review on February 14, 2024, 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 March 20, 2024, with responses from the Applicant due April 3, 2024. The Board received comments and recommendations from Environment and Climate Change Canada (ECCC), GNWT – Environment and Climate Change (Inspector), Fisheries and Oceans, GNWT – Education, Culture and Employment – Prince of Wales Northern Heritage Centre, Łı́ı́ııı Kúé First Nation, and Transport Canada (attached).⁵

Since there were no requests to extend the reviewer comment deadlines, 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](#).

Pursuant to Schedule 4.1 of [Northwest Territory Métis Nation \(NWTMN\) Interim Measures Agreement](#),⁶ the Board determined that written notice was given to the NWTMN and that a reasonable period of time was allowed for NWTMN to make representations with respect to the Applications.

⁵ See MVLWB Online Registry for [GNWT – INF – Redknife River Bridge – Review Summary Table – May1 24](#).

⁶ See MVLWB Land Claims, IMAs, and Land Use Plans webpage to access the [Northwest Territory Métis Nation Interim Measures Agreement](#).

Pursuant to section 27, paragraphs (a) and (b) of the [Dehcho First Nations \(DCFN\) Interim Measures Agreement](#),⁷ the Board has determined that written notice was given to the DCFN, and that a reasonable period of time was allowed for DCFN to make representations with respect to the Applications.

4.0 Potential Impacts and Proposed Mitigations

Table 1 below summarizes:

- the potential impacts of the proposed 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.

⁷ See MVLWB Land Claims, IMAs, and Land Use Plans webpage to access the [Dehcho First Nations Interim Measures Agreement](#).

Table 1: Potential Impacts and Proposed Mitigations for the Proposed 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
Change in Air Quality	<ul style="list-style-type: none"> • Site clearing and staging, construction activities, and closure and reclamation will generate vehicle and equipment emissions • Earthworks have potential to generate dust • Camp operations will emit fugitive emissions if wastes are managed by incineration. 	<ul style="list-style-type: none"> • The Applicant proposed the following mitigations in the Applications • Dust suppression will be applied to construction areas as needed to reduce dust. • Construction equipment will be maintained in good working order. • Idling of project vehicles will be discouraged or limited when conditions allow. • Cold starts of equipment will be limited to the extent possible. • The contractor will be encouraged to use modern construction equipment that has lower greenhouse gas emissions. • Project vehicles will adhere to speed limits as posted on the public highway. • Vehicles speeds will be reduced when traveling through the construction area. • Incinerators, if intended to be used by the contractor, will be operated in accordance with manufacturer’s specifications and emissions will meet Canadian Council of Ministers of the Environment Canada Wide Standards for Dioxins & Furans and Mercury. • Details of management and operation of incinerators will be included in the Waste Management Plan. • The Board has standard permit and licence conditions that are typically used to mitigate the identified potential impacts:⁸ 	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 or be a cause of public concern.
Change in noise level	<ul style="list-style-type: none"> • Site clearing and staging, construction activities, and 	<ul style="list-style-type: none"> • The Applicant proposed the following mitigations in the Applications • Construction equipment will be maintained in good working order. • Construction vehicles and equipment will be equipped with manufacturer recommended noise muffling equipment. 	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 or be a cause of public

⁸ See the MVLWB Policies and Resources webpage to access the LWB [Standard Water Licence Conditions Template](#) and LWB [Standard Land Use Permit Conditions Template](#).

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
	closure and reclamation will generate sound through operation of equipment <ul style="list-style-type: none"> • Camp operations will generate sounds from generators and pumps 	<ul style="list-style-type: none"> • The Board has standard permit and licence conditions that are typically used to mitigate the identified potential impacts:⁹ 	concern.
Change to surface water quality	<ul style="list-style-type: none"> • Exposed soil and disturbance during site clearing and staging, construction activities, and closure and reclamation may result in erosion of soil causing degradation of water quality • Use of granular materials with acid leaching (ARD) or metal 	<ul style="list-style-type: none"> • The Applicant proposed the following mitigations in the Applications • The ESCP will be implemented. The ESP will incorporate measures in the GNWT Erosion and Sediment Control (ESC) Manual (GNWT 2013). Measures in the ESCP will be implemented prior to construction activities and before the spring melt/freshet, and inspected regularly to confirm they are performing as intended. • In-stream construction will be conducted in the dry, using isolation techniques. • Temporary isolation will occur for the placement of rip rap and removal of culverts and will follow the Code of Practice: Temporary Cofferdams and Diversion Channels (Interim) (DFO 2020a). • Water withdrawal will be within the limits of water licences and in accordance with the DFO measures to protect fish and fish habitat (e.g., DFO 2010, 2013) and other applicable guidance. • Surface runoff will be directed away from existing waterbodies. • Disturbed areas will be re-graded and stabilized per design or pre-disturbance grades as soon as is practicable. 	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 or be a cause of public concern.

⁹ See the MVLWB Policies and Resources webpage to access the LWB [Standard Water Licence Conditions Template](#) and LWB [Standard Land Use Permit Conditions Template](#).

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
	leaching (ML) potential could cause degradation of water quality <ul style="list-style-type: none"> • Camp operations may result in introduction of contaminants to the freshwater environment (e.g., garbage, greywater, blackwater) • Potential spillage of fuel may result in introduction of contaminants to freshwater environment 	<ul style="list-style-type: none"> • Closure and reclamation will promote re-establishment of native vegetation ground cover. • Only material with low ARD and ML potential will be used for the Project. • Rip rap will be free of silt and other debris. • A WMP (Appendix C.3) will be developed and implemented. • Areas and containers used to store Project wastes will be constructed, operated, and maintained in a manner to prevent waste from discharging to the surrounding environment. • A SCP (Appendix C.1) will be developed and measures in the SCP will be implemented. The SCP includes procedures to prevent and respond to spills. • Fuel handling and refueling will be in accordance with Standard Operating Procedures. • Use of equipment in water will be minimized. • Machinery will arrive on site in a clean condition and free of invasive species and noxious weeds. • All refueling and maintenance of equipment will be conducted more than 100 m from the ordinary highwater mark of a waterbody and in designated areas. Fuels and oils/lubricants will be stored more than 100 m from the ordinary highwater mark of a watercourse or waterbody. • Equipment such as vehicles, generators and pumps will have secondary containment installed capable of containing fuel drips or leaks during operations and refueling. • Machinery will be maintained and regularly inspected for fuel, oil, or other fluid leaks. Machinery found leaking will be withdrawn from service and repaired. 	

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
		<ul style="list-style-type: none"> • All Site personnel will be provided training to ensure familiarity with safe handling and refueling procedures, spill prevention, spill response and reporting requirements. • Vehicles parked for more than 24 hours will use drip trays. • The Board has standard permit and licence conditions that are typically used to mitigate the identified potential impacts:¹⁰ 	
Change to surface water quality	<ul style="list-style-type: none"> • Change in ground cover and surface grades may result in alterations to the rate, pattern and volume of surface water runoff • Water withdrawal for construction activities (isolations and dust control) and camp operation can change flows 	<ul style="list-style-type: none"> • The Applicant proposed the following mitigations in the Applications • Surface water withdrawals, if required, will be in accordance with regulatory requirements. • Water withdrawal will be in accordance with the Framework for Assessing Ecological Flow Requirements to Support Fisheries in Canada (DFO 2013). • Bridge abutments and rip rap erosion protection will be complete in accordance with design and will maintain flows and fish passage. • The Board has standard permit and licence conditions that are typically used to mitigate the identified potential impacts:¹¹ 	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 or be a cause of public concern.
Change to ground water quality	<ul style="list-style-type: none"> • Potential spillage of fuel may result in introduction of contaminants to freshwater 	<ul style="list-style-type: none"> • The Applicant proposed the following mitigations in the Applications • A SCP (Appendix C.1) will be developed and measures in the SCP will be implemented. The SCP includes procedures to prevent and respond to spills. 	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 or be a cause of public concern.

¹⁰ See the MVLWB Policies and Resources webpage to access the LWB [Standard Water Licence Conditions Template](#) and LWB [Standard Land Use Permit Conditions Template](#).

¹¹ See the MVLWB Policies and Resources webpage to access the LWB [Standard Water Licence Conditions Template](#) and LWB [Standard Land Use Permit Conditions Template](#).

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
	environment <ul style="list-style-type: none"> • Camp operations may result in introduction of contaminants to the freshwater environment (e.g., garbage, greywater, blackwater) 	<ul style="list-style-type: none"> • Fuel handling and refueling will be in accordance with Standard Operating Procedures. • All refueling and maintenance of equipment will be conducted more than 100 m from the ordinary highwater mark of a waterbody and in designated areas. • All Site personnel will be provided training to ensure familiarity with safe handling and refueling procedures, spill prevention, spill response and reporting requirements. • Vehicles parked for more than 24 hours will use drip trays. • A WMP (Appendix C.2) will be developed and implemented. • Areas and containers used to store Project wastes will be constructed, operated, and maintained in a manner to prevent waste from discharging to the surrounding environment. • The Board has standard permit and licence conditions that are typically used to mitigate the identified potential impacts.¹² 	
Change to fish habitat	<ul style="list-style-type: none"> • Loss or alteration of riparian area • Loss or alteration of fish habitat below the OHWM 	<ul style="list-style-type: none"> • The Applicant proposed the following mitigations in the Applications • Activities will be restricted to workspaces and access roads. Prior to the start of construction, the boundaries of the work area, staging areas, and access will be staked and/or flagged. • Clearing will be limited to areas required for construction and safe operations. • Riparian vegetation will be maintained whenever possible • Instream work will be limited to the extent possible. • Rip rap placement will be timed to avoid restricted activity timing windows for the NWT for fish as applicable to the Redknife River based on reported fish species for the river (23-HCAA-02258). • Grading of 	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 or be a cause of public concern.

¹² See the MVLWB Policies and Resources webpage to access the LWB [Standard Water Licence Conditions Template](#) and LWB [Standard Land Use Permit Conditions Template](#).

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
		stream banks at approaches shall be minimized, where possible. <ul style="list-style-type: none"> The Board has standard permit and licence conditions that are typically used to mitigate the identified potential impacts:¹³ 	
Change to fish health	<ul style="list-style-type: none"> Water withdrawal resulting in the entrainment, impingement or stranding of fish Increased sedimentation Introduction of deleterious substance due to accidental spills or use of acid/metal leaching rock used in rip rap. 	<ul style="list-style-type: none"> The Applicant proposed the following mitigations in the Applications Water withdrawal will be within the limits of water licences and in accordance with the DFO measures to protect fish and fish habitat (e.g., DFO 2010, 2013) and other applicable guidance. Water withdrawal will be in accordance with the Interim Code of Practice: End-of-pipe Fish Protection Screens for Small Water Intakes in Freshwater (DFO 2020a) and Framework for Assessing Ecological Flow Requirements to Support Fisheries in Canada (DFO 2013). Fish rescue from isolations will be conducted as required, under the guidance of a Qualified Person. A Project-specific Erosion and Sediment Control Plan (ESCP) will be developed. Measures in the ESCP will be implemented prior to construction activities and before spring melt and inspected regularly to confirm they are performing as intended. Excavated spoil material will be placed at least 30 m from the watercourse or waterbody with the appropriate erosion control measures in place to prevent sediment from entering a watercourse or waterbody. Temporary instream isolations to prevent sediment entering the watercourse will follow applicable measures in DFO's Interim Code of Practice for Temporary Cofferdams and Diversion Channels (DFO 2020b). Rip rap will be free of silt and other debris A SCP will be developed and measures in the SCP will be implemented. The SCP includes procedures to prevent and respond to spills. 	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 or be a cause of public concern.

¹³ See the MVLWB Policies and Resources webpage to access the LWB [Standard Water Licence Conditions Template](#) and LWB [Standard Land Use Permit Conditions Template](#).

Potential Impact	Activity	<p style="text-align: center;">Proposed Mitigations</p> <p style="text-align: center;"><i>Description of measures to reduce potential impacts, including consideration of cumulative impacts and climate change.</i></p>	Board Analysis and Determination
		<ul style="list-style-type: none"> • All Site personnel will be provided training to ensure familiarity with safe handling and refueling procedures, spill prevention, spill response, and reporting requirements. • Fuel-fired equipment such as vehicles, generators, and pumps will have secondary containment installed capable of containing fuel drips or leaks during operations and refueling. • Fuel will be stored in containers with secondary containment capable of 110% of the largest container. • Fuel handling and refueling will be in accordance with Standard Operating Procedures. • Washing, refueling, and servicing machinery and storage of fuel and other materials for machinery will be conducted a minimum of 100 m from the OHWM and in a manner to prevent any deleterious substances from entering the water. • Areas and containers used to store project wastes will be constructed, operated, and maintained in a manner to prevent waste from discharging to the surrounding environment. • Machinery will arrive on site in clean condition and free of invasive species and noxious weeds. • Machinery will be maintained and regularly inspected for fuel, oil, or other fluid leaks. Machinery found leaking will be withdrawn from service and repaired. • Machinery will not be left in any waterbody. • Only material with low ARD and ML potential will be used for the Project. • The Board has standard permit and licence conditions that are typically used to mitigate the identified potential impacts:¹⁴ 	

¹⁴ See the MVLWB Policies and Resources webpage to access the LWB [Standard Water Licence Conditions Template](#) and LWB [Standard Land Use Permit Conditions Template](#).

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
Change to terrain, soil, and permafrost conditions	<ul style="list-style-type: none"> • Construction related activities (e.g., travel and movement of equipment across the ground, cutting/excavating into the ground) could lead to: • Erosion and drainage pattern changes as a result of ground disturbance • Modification of local soil drainage conditions including modified drainage alongside the roadway • Ground disturbance leading to soil erosion and slope instability • Modification of 	<ul style="list-style-type: none"> • The Applicant proposed the following mitigations in the Applications • Travel of vehicles will be confined to existing roads and trails and approved work areas to avoid disturbing vegetated areas outside of the PA. • Organic material and topsoil will be set aside for use during reclamation, where possible. • Closure and reclamation will promote re-establishment of native vegetation ground cover. • Disturbed areas will be re-graded and stabilized per design or pre-disturbance grades as soon as is practicable. • A Project-specific ESCP incorporating measures in the GNWT Erosion and Sediment Control (ESC) Manual (GNWT 2013) will be implemented. The ESCP will be implemented prior to construction activities and before the spring melt/freshet and inspected regularly to confirm they are performing as intended. • The Board has standard permit and licence conditions that are typically used to mitigate the identified potential impacts:¹⁵ 	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 or be a cause of public concern.

¹⁵ See the MVLWB Policies and Resources webpage to access the LWB [Standard Water Licence Conditions Template](#) and LWB [Standard Land Use Permit Conditions Template](#).

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
	air/ground thermal balance; increased seasonal thawing depth and potential subsidence due to loss of permafrost (if at all present within the PA)		
Change to vegetation community diversity	<ul style="list-style-type: none"> Site clearing during construction may result in alteration to vegetation community distribution and abundance. 	<ul style="list-style-type: none"> The Applicant proposed the following mitigations in the Applications The Project will use previously disturbed areas for project activities and project infrastructure and workspaces to the extent possible. Travel of vehicles will be confined to existing roads and trails and approved work areas to avoid disturbing vegetated areas outside of the PA. Disturbed areas will be re-graded and stabilized per design or pre-disturbance grades as soon as is practicable. Equipment originating from outside of the NWT will be cleaned prior to mobilization to reduce potential for introduction of invasive alien species. Organic material and topsoil will be set aside for use during reclamation, where possible. Closure and reclamation will promote natural revegetation. A Project-specific ESCP incorporating measures in the GNWT Erosion and Sediment Control Manual (GNWT 2013) will be implemented. The ESCP will be implemented prior to construction activities and before the spring melt/freshet and inspected regularly to confirm they are performing as intended. 	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 or be a cause of public concern.

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
		<ul style="list-style-type: none"> The Board has standard permit and licence conditions that are typically used to mitigate the identified potential impacts:¹⁶ 	
Change to vegetation species diversity	<ul style="list-style-type: none"> Site clearing and vehicle and equipment travel during all project phases may affect vegetation species or introduce invasive alien species 	<ul style="list-style-type: none"> The Applicant proposed the following mitigations in the Applications The Project will use previously disturbed areas for project activities and project infrastructure and workspaces to the extent possible. Travel of vehicles will be confined to existing roads and trails and approved work areas to avoid disturbing vegetated areas outside of the PA. Equipment originating from outside of the NWT will be cleaned prior to mobilization to avoid introduction of invasive and/or alien species. Organic material and topsoil will be set aside for use during reclamation, where possible. Closure and reclamation will promote natural revegetation. The Board has standard permit and licence conditions that are typically used to mitigate the identified potential impacts:¹⁷ 	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 or be a cause of public concern.
Change in habitat	<ul style="list-style-type: none"> Direct loss or alteration of wildlife habitat (e.g., vegetation clearing, edge effects). Indirect habitat loss due to sensory disturbance. 	<ul style="list-style-type: none"> The Applicant proposed the following mitigations in the Applications The Project will use previously disturbed areas for project activities and project infrastructure and workspaces to the extent possible. Clearing will be limited to areas required for construction. The Project will follow measures in the Wildlife Management and Monitoring Plan ([WMMP] Appendix C.3) to protect wildlife and wildlife habitat. Equipment originating from outside of the NWT will be cleaned prior to mobilization to avoid introduction of invasive alien species. A Project-specific ESCP incorporating measures in the GNWT Erosion 	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 or be a cause of public concern.

¹⁶ See the MVLWB Policies and Resources webpage to access the LWB [Standard Water Licence Conditions Template](#) and LWB [Standard Land Use Permit Conditions Template](#).

¹⁷ See the MVLWB Policies and Resources webpage to access the LWB [Standard Water Licence Conditions Template](#) and LWB [Standard Land Use Permit Conditions Template](#).

Potential Impact	Activity	<p align="center">Proposed Mitigations</p> <p align="center"><i>Description of measures to reduce potential impacts, including consideration of cumulative impacts and climate change.</i></p>	Board Analysis and Determination
		<p>and Sediment Control Manual (GNWT 2013) will be implemented. The ESCP will be implemented prior to construction activities and before the spring melt/freshet and inspected regularly to confirm they are performing as intended.</p> <ul style="list-style-type: none"> • The Project will adhere to applicable recommended setbacks outlined in the WMMP where possible. • The Project will follow the Guidelines to Reduce Risk to Migratory Birds (ECCC 2021). • Travel of vehicles will be confined to existing roads and trails and approved work areas to avoid disturbing vegetated areas outside of the PA. • Vegetation clearing will be completed outside the migratory bird nesting period of May 2 to August 21 (Zone B7; ECCC 2023b) and will consider the Critical Breeding Periods for Raptor Species of the NWT (Shank and Poole 2016) to avoid disturbing species that breed prior to the migratory bird nesting periods. • Wildlife monitors will assess for the presence of ground nesting birds and wildlife in or near the Project area, including machinery, buildings, stockpiles, and simple habitat during Project activities. If an active nest is found, beneficial management practices (GNWT 2020) will be followed, including applying an appropriate setback and timing restriction (Table 1 in Appendix C.3) and discussion with GNWT ENR and ECCC. • Dust suppression will be applied to construction areas as needed to reduce dust. • Closure and reclamation will promote re-establishment of vegetation. • The Board has standard permit and licence conditions that are typically 	

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
		used to mitigate the identified potential impacts. ¹⁸	
Change in mortality risk	<ul style="list-style-type: none"> Construction and operation can result in increased wildlife mortality risk (e.g., destruction of nests, dens, number of fatalities) due to vegetation removal, vehicular collisions, and human wildlife conflicts 	<ul style="list-style-type: none"> The Applicant proposed the following mitigations in the Applications An electric fence may be set up around the camp(s) if deemed necessary to deter wildlife. Camp incinerators, where used, will be operated in accordance with manufacturer’s specifications. Food waste will be stored and disposed of in a manner to avoid attracting wildlife. No littering will be permitted in Project areas. The Project will adhere to applicable recommended setbacks outlined in the WMMP where possible. Vegetation clearing will be completed outside the migratory bird nesting period of May 2 to August 21 (Zone B7; ECCC 2023) and will consider the Critical Breeding Periods for Raptor Species of the NWT (Shank and Poole 2016) to avoid disturbing species that breed prior to the migratory bird nesting periods. Wildlife monitors will assess for the presence of ground nesting birds and wildlife in or near the Project area, including machinery, buildings, stockpiles, and simple habitat during Project activities. If an active nest is found, beneficial management practices (GNWT 2020) will be followed, including applying an appropriate setback and timing restriction (Table 1 in Appendix C.3) and discussion with GNWT ENR and ECCC. Personnel will not feed, harass, or hunt wildlife while working on the Project. 	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 or be a cause of public concern.

¹⁸ See the MVLWB Policies and Resources webpage to access the LWB [Standard Water Licence Conditions Template](#) and LWB [Standard Land Use Permit Conditions Template](#).

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
		<ul style="list-style-type: none"> • Personnel will undergo a wildlife awareness program which will include prevention measure for wildlife mortality (e.g., bear safety) and reporting procedures for wildlife related incidents and protocols to follow when a nest, den, or wildlife species of management concern is observed. This includes completing wildlife sighting and wildlife incident report forms included in the WMMP. • Personnel will undergo a wildlife awareness program which will include prevention measure for wildlife mortality (e.g., bear safety) and reporting procedures for wildlife related incidents and protocols to follow when a nest, den, or wildlife species of management concern is observed. This includes completing wildlife sighting and wildlife incident report forms included in the WMMP. • Travel of vehicles will be confined to existing roads and trails and approved work areas to avoid disturbing vegetated areas outside of the PA. • Wildlife on or adjacent to the road will be always given the ROW by all Project personnel. • The Board has standard permit and licence conditions that are typically used to mitigate the identified potential impacts.¹⁹ 	
Change to availability of resources used for traditional purposes	<ul style="list-style-type: none"> • Loss or alteration of fish habitat • Change to fish health Change to water quality • Direct loss or alteration of wildlife habitat 	<ul style="list-style-type: none"> • The Applicant proposed the following mitigations in the Applications • The Project will apply mitigation measures to reduce effects on fish and fish habitat • The Project will apply mitigation measures to reduce effects on water quality • The Project will apply mitigation measures to reduce effects on vegetation • The Project will apply mitigation measures to reduce effects on wildlife 	Board’s opinion that the proposed activities will not have a significant adverse impact on the environment or be a cause of public concern.

¹⁹ See the MVLWB Policies and Resources webpage to access the LWB [Standard Water Licence Conditions Template](#) and LWB [Standard Land Use Permit Conditions Template](#).

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
	<ul style="list-style-type: none"> • Indirect habitat loss due to sensory disturbance • Indirect effects on Indigenous peoples that adversely affect the perception of and/or perceived value of the availability of traditional resources • Construction and operation activities which may result in loss, alteration, restriction or alienation from trails and access ways to lands and resources which are used for traditional purposes • 	<ul style="list-style-type: none"> • A Project-specific ESCP will be implemented. Measures in the ESCP will be implemented prior to construction activities and before the spring melt/freshet and inspected regularly to confirm they are performing as intended. • A SCP will be implemented. The SCP includes procedures to prevent and respond to spills. • A WMMP (Appendix C.3) will be implemented. The Project will follow measures in the WMMP to protect wildlife and wildlife habitat. • The Project will use previously disturbed areas for project infrastructure and workspaces to the extent practical. • Access across the Redknife River will be maintained throughout project construction. • The GNWT will communicate the schedule of construction activities in advance of construction. • The Board has standard permit and licence conditions that are typically used to mitigate the identified potential impacts.²⁰ 	

²⁰ See the MVLWB Policies and Resources webpage to access the LWB [Standard Water Licence Conditions Template](#) and LWB [Standard Land Use Permit Conditions Template](#).

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
	Indirect effects on Indigenous peoples that adversely affect the perception of and/or perceived value of access to traditional resources for current use, and/or sites and areas of importance <ul style="list-style-type: none"> • 		
Change to cultural and spiritual sites	<ul style="list-style-type: none"> • Construction and operation activities which may result in loss, alteration, restriction or alienation of current harvesting sites, habitation areas, cultural and sacred areas • Indirect effects on Indigenous peoples that adversely affect 	<ul style="list-style-type: none"> • The Applicant proposed the following mitigations in the Applications • The Project will use previously disturbed areas for project infrastructure and workspaces to the extent practical. • Instream work will be limited to the extent possible. • Dust suppression will be applied to construction areas as needed to reduce dust. • The GNWT will communicate the schedule of construction activities in advance of construction. • The GNWT will complete and comply with requirements as issued by GNWT-ECE (e.g., Archaeological Impact Assessment [AIA]), including avoidance of areas of high archaeological site potential. • The GNWT will develop and adhere to a protocol for chance finds of archaeological sites, features and/or materials during construction. • The GNWT will adhere to regulatory requirements to protect heritage resources if present near the PA 	Board's opinion that the proposed activities will not have a significant adverse impact on the environment or be a cause of public concern.

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
	the perception of and/or perceived value of current cultural, spiritual and traditional use sites and areas	<ul style="list-style-type: none"> The Board has standard permit and licence conditions that are typically used to mitigate the identified potential impacts:²¹ 	
Change to site contents and context	<ul style="list-style-type: none"> Surface and subsurface ground disturbance can impact cultural or archaeological materials, sites, features and their context. 	<ul style="list-style-type: none"> The Applicant proposed the following mitigations in the Applications The GNWT will submit project information to the GNWT-ECE at PWNHC, via AOA. The GNWT will complete and comply with requirements as issued by GNWT-ECE (e.g., AIA), including avoidance of areas of high archaeological site potential. The GNWT will develop and adhere to a protocol for chance finds of archaeological sites, features and/or materials during construction. The GNWT will adhere to regulatory requirements to protect heritage resources if present near the PA. The Board has standard permit and licence conditions that are typically used to mitigate the identified potential impacts:²² 	Board's opinion that the proposed activities will not have a significant adverse impact on the environment or be a cause of public concern.

²¹ See the MVLWB Policies and Resources webpage to access the LWB [Standard Water Licence Conditions Template](#) and LWB [Standard Land Use Permit Conditions Template](#).

²² See the MVLWB Policies and Resources webpage to access the LWB [Standard Water Licence Conditions Template](#) and LWB [Standard Land Use Permit Conditions Template](#).

4.1 Consideration of Potential Impacts

Based on the potential impacts and proposed mitigations identified above in Table 1, the Board considered whether the Project might have a significant adverse impact on the environment. In general, impacts of the Project on the environment can be mitigated through the use of standard permit and licence conditions and/or project-specific conditions established by the Board as per the LWB [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.

A draft Licence and Permit were circulated for review during the regulatory proceeding, and all Parties were given the opportunity to provide comments and recommendations on the draft conditions. In finalizing the conditions, the Board will consider all of the evidence provided through the regulatory proceeding.

4.2 Consideration of Public Concern

In addition to considering the potential impacts of the Project, the Board considered whether the Project might be a cause of public concern.

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 has reviewed all the evidence received during the regulatory process with respect to the Preliminary Screening of the proposed Project. Based on the evidence, it is the Board's opinion that the proposed 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 Project to Environmental Assessment and will resume the regulatory proceeding.

If the Board does not receive a notice of referral to environmental assessment by **May 12, 2024**, the Board can issue the Licence on **Monday May 13, 2024**.

SIGNATURE



Tanya MacIntosh, Chair
Mackenzie Valley Land and Water Board

May 2, 2024

Date