



Mackenzie Valley Land and Water Board
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September 9, 2019

File: MV2019C0011

Mr. David Harpley
Canadian Zinc Corporation
SUITE 1710-650 West Georgia Street
Vancouver BC V6B 4N9

Email: David.Harpley@norzinc.com

Dear Mr. Harpley:

**Issuance of Type A Land Use Permit
Mineral Exploration – Prairie Creek Mine, NT**

Attached is Type A Land Use Permit MV2019C0011 granted by the Mackenzie Valley Land and Water Board (MVLWB or the Board) in accordance with the *Mackenzie Valley Resource Management Act* (MVRMA). This Permit has been approved for a period of five years effective September 9, 2019 and expiring September 8, 2024.

Preliminary Screening Exemption Confirmation

Based on the evidence provided, the Board has also confirmed that the Application is exempt from preliminary screening as per Schedule 1, Paragraph 2 of the Exemption List Regulations of the MVRMA which states:

A development, or part thereof, for which renewal of a permit, licence or authorization is requested that

- a) Has not been modified; and
- b) Has fulfilled the requirements of the environmental assessment process established by the *Mackenzie Valley Resource Management Act*, the *Canadian Environmental Assessment Act* or the *Environmental Assessment Review Process Guidelines Order*.

Permit Conditions

Please read all conditions carefully. For the purpose of submitting plans in accordance with this Permit, the date of this letter, September 9, 2019, is the effective date.

Reclamation Security

In accordance with Permit condition 49 a security deposit in the amount of \$236,338 shall be posted with the Minister and copied to the Board within 90 days of the effective date of the Permit under section 32 of the Mackenzie Valley Land Use Regulations. As delegated under Schedule A of the Delegation Instrument under the MVRMA, this security deposit, **payable to the Government of the Northwest Territories** in the amount of \$236,338, shall be submitted to: the Government of the Northwest Territories, Department of Lands, North Slave Regional Office, 140 Bristol Avenue, Yellowknife NT, X1A 3T2. For more information about posting security with the GNWT, please contact Charlene Coe, Land Use Advisor, at (867) 767-9187 (ext. 24194). Please send a copy of the receipt for the security deposit to the MVLWB office prior to the start of your operation.

Management Plan - Approved

The Board hereby approves the Engagement Plan submitted with the Application.

Management Plans – Resubmission Required

The Board hereby requires that Canadian Zinc Corporation Ltd. resubmit the Waste Management Plan and Spill Contingency Plan within 90 days in accordance with comments made during this review, as summarized in the attached Reasons for Decision. These Plans will be considered to be approved, conditionally upon receipt of this information and written conformity of confirmation from Board staff.

Discontinuance

Should you wish to discontinue your land-use operation at any time prior to the expiry date set out in the Permit, a written notice of discontinuance is required as per section 37 of the MVLUR, in addition to the submission of a final plan.

Public Registry

A copy of this Permit and all related correspondence and documents has been filed on the [Public Registry](#) at the MVLWB office. Please be advised that this letter, inspection reports, and related correspondence is part of the Public Registry and is intended to keep all interested parties informed of the manner in which the Permit requirements are being met. All Public Registry material will be considered if an amendment to the Permit is requested.

The full cooperation of Canadian Zinc Corporation Ltd. is anticipated and appreciated. If you have any questions or concerns, please contact Julian Morse at (867) 766-7453 or email jmorse@mvlwb.com.

Yours sincerely,



Mavis Cli-Michaud
MVLWB, Chair

Copied to: Distribution List
Charlene Coe, GNWT, Land Use Advisor

Attached: Land Use Permit MV2019C0011
Reasons for Decision



Land Use Permit

Permit Class	Permit No	Amendment No
A	MV2019C0011	

Subject to the Mackenzie Valley Land Use Regulations and the terms and conditions in this Permit, authority is hereby granted to:

Canadian Zinc Corporation Ltd.

Permittee

to proceed with the land use operation described in the Application of:

Signature Mr. David Harpley	Date July 9, 2019
Type of Land Use Operation Mineral Exploration	
Location Prairie Creek Mine, NT	

This Permit may be assigned, extended, discontinued, suspended, or cancelled pursuant to the Mackenzie Valley Land Use Regulations.

Dated at Yellowknife this 29 day of August, 2019

Signature Chair

Mavis Cli-Michaud

Signature Witness

Amanda Gauthier

Effective Date:
September 9, 2019

Expiry Date:
September 8, 2024

ATTENTION

It is a condition of this Permit that the Permittee comply with the provisions of the *Mackenzie Valley Resource Management Act* and Regulations and the terms and conditions set out herein. A failure to comply may result in suspension or cancellation of this Permit.

Conditions Annexed to and Forming Part of Land Use Permit # MV2019C0011

Part A: Scope of Permit

1. This Permit entitles the Permittee to conduct the following land-use operation:
 - a) Mining exploration and associated activities including underground decline development at the 870 metre elevation at the Prairie Creek Mine.
2. This Permit is issued subject to the conditions contained herein with respect to the use of land for the activities and area identified in Part A, item 1 of this Permit.
3. Compliance with the terms and conditions of this Permit does not excuse the Permittee from its obligation to comply with the requirements of any applicable Federal, Territorial, Tłıchq, or Municipal laws.

Part B: Definitions (defined terms are capitalized throughout the Permit)

Act - the *Mackenzie Valley Resource Management Act*.

Board - the Mackenzie Valley Land and Water Board established under Part 4 of the Act.

Borehole - a hole that is made in the surface of the ground by drilling or boring.

Dogleg - the clearing of a line, trail, or right-of-way that is curved sufficiently so that no part of the clearing beyond the curve is visible when approached from either direction.

Drilling Fluids - any liquid mixture of water, sediment, drilling muds, chemical additives or other wastes that are pumped down hole while drilling and are specifically related to drilling activity.

Drilling Waste - all materials or chemicals, solid or liquid, associated with drilling, including drill cuttings and Drilling Fluids.

Engagement Plan - a document, developed in accordance with the Board's *Engagement and Consultation Policy* and the *Engagement Guidelines for Applicants and Holders of Water Licences and Land Use Permits*, that clearly describes how, when, and which engagement activities will occur with an affected party during the life of the project.

Flowing Artesian Well - a well in which water:

- a) Naturally rises above the ground surface or the top of any casing; and
- b) Flows naturally, either intermittently or continuously.

Fuel Storage Container - a container for the storage of petroleum or allied petroleum products with a capacity of less than 230 litres.

Fuel Storage Tank - a closed container for the storage of petroleum or allied petroleum products with a capacity of more than 230 litres.

Greywater - all liquid wastes from showers, baths, sinks, kitchens, and domestic washing facilities but not including toilet wastes.

Habitat - the area or type of site where a species or an individual of a species of wildlife naturally occurs or on which it depends, directly or indirectly, to carry out its life processes.

Inspector - an Inspector designated by the Minister under the Act.

Minister - the Minister of Indian Affairs and Northern Development Canada or the Minister of the Government of the Northwest Territories – Department of Lands, as the case may be.

Ordinary High Water Mark - the usual or average level to which a body of water rises at its highest point and remains for sufficient time so as to change the characteristics of the land. In flowing waters (rivers, streams) this refers to the “active channel/bank-full level” which is often the 1:2 year flood flow return level. In inland lakes, wetlands, or marine environments, it refers to those parts of the Watercourse bed and banks that are frequently flooded by water so as to leave a mark on the land and where the natural vegetation changes from predominately aquatic vegetation to terrestrial vegetation (excepting water tolerant species). For reservoirs, this refers to normal high operating levels (full supply level).

Permittee - the holder of this permit.

Secondary Containment - containment that prevents liquids that leak from Fuel Storage Tanks or containers from reaching outside the containment area and includes double-walled Tanks, piping, liners, and impermeable barriers.

Sewage - all toilet wastes and Greywater.

Spill Contingency Plan - a document, developed in accordance with Aboriginal Affairs and Northern Development Canada’s *Guidelines for Spill Contingency Planning* (April 2007), that describes the set of procedures to be implemented to minimize the effects of a spill.

Sump - a man-made pit or natural depression in the earth’s surface used for the purpose of depositing Waste that does not contain Toxic Material, such as non-toxic Drilling Waste or Sewage, therein.

Toxic Material - any substance that enters or may enter the environment in a quantity or concentration or under conditions such that it:

- a) Has or may have an immediate or long-term harmful effect on the environment or its biological diversity;
- b) Constitutes or may constitute a danger to the environment on which life depends; or
- c) Constitutes or may constitute a danger in Canada to human life or health.

Waste - any garbage, debris, chemical, or Toxic Material to be used, stored, disposed of, or handled on land, and also as defined in section 51 of the Act.

Waste Management Plan - a document, developed in accordance with the Board’s *Guidelines for Developing a Waste Management Plan*, that describes the methods of Waste management from Waste generation to final disposal.

Watercourse - a natural body of flowing or standing water or an area occupied by water during part of the year, and includes streams, springs, swamps and gulches but does not include groundwater.

Part C: Conditions Applying to All Activities (headings correspond to subsection 26(1) of the Mackenzie Valley Land Use Regulations)

Condition	Category
26(1)(a) Location and Area	
1. The Permittee shall use an existing campsite, as described in the complete application.	EXISTING CAMP
2. Prior to the commencement of drilling, the Permittee shall submit the drill target locations on a 1:50,000-scale map with coordinates and map datum to the Board and an Inspector.	DRILL LOCATIONS
3. The Permittee shall not construct parallel lines or roads, unless an existing line or road cannot be used.	PARALLEL ROADS
4. The Permittee shall locate all lines, trails, and right-of-ways to be constructed parallel to any Watercourse a minimum of 100 metres from the Ordinary High Water Mark, except at crossings.	PARALLEL WATERCOURSE
5. The Permittee shall not conduct this land-use operation on any lands not designated in the complete application.	LOCATION OF ACTIVITIES
6. The Permittee shall confine the width of the right of way to a maximum of ten (10) metres, unless otherwise authorized in writing by a Land Use Inspector. The Permittee shall not clear a right-of-way that is wider than 12 metres.	WIDTH RIGHT-OF-WAY
26(1)(b) Time	
8. At least 48 hours prior to the commencement of the land-use operation, the Permittee's Field Supervisor shall contact an Inspector at (867) 695-2626.	CONTACT INSPECTOR
9. At least 48 hours prior to commencement of the land-use operation, the Permittee shall provide the following information, in writing, to the Board and an Inspector: a) the name(s) of the person(s) in charge of the field operation; b) alternates; and c) all methods for contacting the above person(s).	IDENTIFY AGENT
10. At least ten days prior to the completion of the land-use operation, the Permittee shall advise an Inspector of: a) the plan for removal or storage of equipment and materials; and b) when final cleanup and reclamation of the land used will be completed.	REPORTS BEFORE REMOVAL

11.	26(1)(c) Type and Size of Equipment	
12.	The Permittee shall not use any equipment except of a similar type, size, and number to that listed in the complete application.	ONLY APPROVED EQUIPMENT
13.	26(1)(d) Methods and Techniques	
14.	The Permittee shall Dogleg lines, trails and right-of-ways that approach Watercourses or public roads.	DOGLEG APPROACHES
15.	Prior to the movement of any vehicle that exerts pressure on the ground in excess of 35 kPa, the Permittee shall scout proposed lines and routes to select the best location for crossing streams and avoiding terrain obstacles.	DETOURS AND CROSSINGS
16.	Immediately upon completion of operations at each Borehole, the Permittee shall remove or cut off and seal each drill casing at ground level.	MINERAL EXPLORATION DRILL CASINGS
17.	26(1)(e) Type, Location, Capacity, and Operation of All Facilities	
18.	The Permittee shall ensure that the land use area is kept clean at all times.	CLEAN WORK AREA
19.	The Permittee shall not locate any Sump within 100 metres of the Ordinary High Water Mark of any Watercourse, unless otherwise authorized in writing by an Inspector.	SUMPS FROM WATER
20.	26(1)(f) Control or Prevention of Ponding of Water, Flooding, Erosion, Slides, and Subsidence of Land	
21.	The land-use operation shall not cause obstruction to any natural drainage.	NATURAL DRAINAGE
22.	The Permittee shall, where flowing water from a Borehole is encountered: <ul style="list-style-type: none"> a) plug the Borehole in such a manner as to permanently prevent any further outflow of water; and b) immediately report the occurrence to the Board and an Inspector. 	FLOWING ARTESIAN WEL
23.	The Permittee shall not cut any stream bank, unless otherwise authorized in writing by an Inspector.	STREAM BANKS
24.	The Permittee shall not ford wet streams.	NO FORDING OF STREAMS
25.	The Permittee shall slope the sides of Waste material piles, excavations, and embankments — except in solid rock — to a minimum ratio of 2:1 vertical, unless otherwise authorized in writing by an Inspector.	EXCAVATION AND EMBANKMENTS

26.	26(1)(g) Use, Storage, Handling, and Ultimate Disposal of Any Chemical or Toxic Material	
27.	The Permittee shall not use any Drilling Fluids, or additives that were not identified in the complete application, unless the MSDSs are provided to the Board and Inspector and usage of the chemical(s) is authorized in writing by the Board.	DRILLING CHEMICALS
28.	At least seven days prior to the use of any chemicals that were not identified in the complete application, the MSDS sheets must be provided to the Board and an Inspector.	CHEMICALS
29.	The Permittee may deposit Drilling Waste that does not contain Toxic Material in a Sump or natural depression. Any Sumps or natural depressions used to deposit Drilling Waste must be located at least 100 metres from the Ordinary High Water Mark of any Watercourse, unless otherwise authorized in writing by an Inspector.	DRILLING WASTE
30.	The Permittee shall remove all Drilling Waste containing Toxic Material to an approved disposal facility.	DRILLING WASTE DISPOSAL
31.	The Permittee shall not allow any Drilling Waste to spread to the surrounding lands or Watercourses.	DRILLING WASTE CONTAINMENT
32.	Prior to the expiry date of this Permit or the end of the land-use operation whichever comes first, the Permittee shall backfill and restore all Sumps, unless otherwise authorized in writing by an Inspector.	BACKFILL SUMPS
33.	The Permittee shall maintain a record of all spills. For all reportable spills, in accordance with the GNWT <i>Spill Contingency Planning and Reporting Regulations</i> , the Permittee shall: <ul style="list-style-type: none"> <li data-bbox="261 1281 1218 1344">a) immediately report each spill to the 24-hour Spill Report Line (867) 920-8130; <li data-bbox="261 1354 1218 1386">b) report each spill to an Inspector within 24 hours; and <li data-bbox="261 1396 1218 1459">c) submit, to the Board and an Inspector, a detailed report on each spill within 30 days. 	REPORT SPILLS
34.	The Permittee shall dispose of all Toxic Material as described in the approved Waste Management Plan.	WASTE CHEMICAL DISPOSAL
35.	The Permittee shall dispose of all Waste petroleum products by removal to an approved disposal facility or by incineration in a device designed for this purpose, as described in the approved Waste Management Plan.	WASTE PETROLEUM DISPOSAL
36.	26(1)(h) Wildlife and Fish Habitat	
37.	The Permittee shall take all reasonable measures to prevent damage to wildlife and fish Habitat during this land-use operation.	HABITAT DAMAGE

38.	26(1)(j) Storage, Handling, and Disposal of Refuse or Sewage	
39.	The Permittee shall adhere to the Waste Management Plan , once approved, and shall annually review the plan and make any necessary revisions to reflect changes in operations, technology, chemicals, or fuels, or as directed by the Board. Revisions to the plan shall be submitted to the Board for approval.	WASTE MANAGEMENT
40.	The Permittee shall keep all garbage and debris in a secure container until disposal.	GARBAGE CONTAINER
41.	The Permittee shall dispose of all garbage, Waste, and debris as described in the approved Waste Management Plan, unless otherwise authorized in writing by an Inspector.	REMOVE GARBAGE
42.	The Permittee shall dispose of all Sewage and Greywater as described in the approved Waste Management Plan.	SEWAGE DISPOSAL – PLAN
43.	26(1)(j) Protection of Historical, Archaeological, and Burial Sites	
44.	The Permittee shall not operate any vehicle or equipment within 150 metres of a known or suspected historical or archaeological site or burial ground.	ARCHAEOLOGICAL BUFFER
45.	The Permittee shall not knowingly remove, disturb, or displace any archaeological specimen or site.	SITE DISTURBANCE
46.	The Permittee shall, where a suspected archaeological or historical site, or burial ground is discovered: <ul style="list-style-type: none"> a) immediately suspend operations on the site; and b) notify the Board at (867) 669-0506 or an Inspector at (867) 695-2626, and the Prince of Wales Northern Heritage Centre at 767-9347 ext. 71250 or ext. 71251. 	SITE DISCOVERY AND NOTIFICATION
47.	26(1)(k) Objects and Places of Recreational, Scenic, and Ecological Value <i>Intentionally left blank</i>	
48.	26(1)(l) Security Deposit	
49.	Within 90 days of the effective date of this Permit, the Permittee shall deposit with the Minister a security deposit in the amount of \$236,338.	SECURITY DEPOSIT
50.	All costs to remediate the area under this Permit are the responsibility of the Permittee.	RESPONSIBILITY FOR REMEDIATION COSTS

51.	26(1)(m) Fuel Storage	
52.	The Permittee shall:	CHECK FOR LEAKS
	a) examine all Fuel Storage Containers and Tank for leaks a minimum of once per day; and	
	b) repair all leaks immediately.	
53.	The Permittee shall not place any Fuel Storage Containers or Tanks within 100 metres of the Ordinary High Water Mark of any Watercourse, unless otherwise authorized in writing by an Inspector.	FUEL NEAR WATER
54.	The Permittee shall ensure that all fuel caches have adequate Secondary Containment.	FUEL CACHE SECONDARY CONTAINMENT
55.	The Permittee shall set up all refueling points with Secondary Containment.	SECONDARY CONTAINMENT – REFUELING
56.	The Permittee shall only use stands approved by an Inspector for supporting Fuel Storage Containers that are in use.	FUEL CONTAINER STANDS
57.	The Permittee shall not allow petroleum products to spread to surrounding lands or Watercourses.	FUEL CONTAINMENT
58.	The Permittee shall locate mobile fuel facilities on land when the facilities are stationary for more than 12 hours.	FUEL ON LAND
59.	The Permittee shall mark all Fuel Storage Containers and Tanks with the Permittee's name.	MARK CONTAINERS AND TANKS
60.	The Permittee shall mark all stationary fuel caches and fuel storage facilities with flags, posts, or similar devices so that they are at all times plainly visible to local vehicle travel.	MARK FUEL LOCATION
61.	The Permittee shall have a maximum of 13,650 litres of fuel stored on the land use site at any time, unless otherwise authorized in writing by the Board.	MAXIMUM FUEL ON SITE
62.	Within ten days of the establishment of any fuel cache, the Permittee shall report the location and quantity of the cache in writing to the Board and an Inspector.	REPORT FUEL LOCATION
63.	The Permittee shall seal all outlets of Fuel Storage Containers and store the containers on their sides with the outlets located at 3 and 9 o'clock, except for containers currently in use.	SEAL OUTLET
64.	The Permittee shall adhere to the Spill Contingency Plan , once approved, and shall annually review the plan and make any necessary revisions to reflect changes in operations, technology, chemicals, or fuels, or as directed by the Board. Revisions to the plan shall be submitted to the Board for approval.	SPILL CONTINGENCY PLAN

65.	Prior to commencement of the land-use operation the Permittee shall ensure that spill-response equipment is in place to respond to any potential spills.	SPILL RESPONSE
66.	All equipment that may be parked for two hours or more, shall have a hazmat/drip tray under it or be sufficiently diapered. Leaky equipment shall be repaired immediately.	DRIP TRAYS
67.	The Permittee shall clean up all leaks, spills, and contaminated material.	CLEAN UP SPILLS
68.	26(1)(n) Methods and Techniques for Debris and Brush Disposal	
69.	The Permittee shall not clear areas larger than identified in the complete application.	MINIMIZE AREA CLEARED
70.	26(1)(o) Restoration of the Lands	
71.	The Permittee shall dispose of all overburden as instructed by an Inspector.	DISPOSAL OF OVERBURDEN
72.	Prior to the expiry date of this Permit, the Permittee shall complete all cleanup and restoration of the lands used.	FINAL CLEANUP AND RESTORATION
73.	The Permittee shall carry out progressive reclamation of disturbed areas as soon as it is practical to do so.	PROGRESSIVE RECLAMATION
74.	26(1)(p) Display of Permits and Permit Numbers	
75.	The Permittee shall keep a copy of this Permit on hand at all times during this land-use operation.	COPY OF PERMIT
76.	26(1)(q) Biological and Physical Protection of the Land	
77.	If any plan is not approved by the Board, the Permittee shall revise the plan according to the Board's direction and re-submit it to the Board for approval.	RESUBMIT PLAN
78.	The Permittee shall adhere to the Engagement Plan , once approved, and shall annually review the plan and make any necessary revisions to reflect changes in operations or as directed by the Board. Revisions to the plan shall be submitted to the Board for approval.	ENGAGEMENT PLAN
79.	All revised plans submitted to the Board shall include a brief summary of the changes made to the plan.	SUMMARY OF CHANGES



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7th Floor - 4922 48th Street
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Reasons for Decision

Issued pursuant to paragraph 40(2)(c) of the Mackenzie Valley Land Use Regulations (MVLUR) and section 36 of the *Waters Act*

Water Licence and Land Use Permit Applications	
Preliminary Screener	MVLWB
File Number	MV2019L2-0006 and MV2019C0011
Company	Canadian Zinc Corporation Ltd.
Project	Mineral Exploration, Prairie Creek Mine, NT
Date of Decision	August 29, 2019

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These Reasons for Decision set out the Mackenzie Valley Land and Water Board's (the MVLWB/Board) regulatory process and decisions on Applications made by Canadian Zinc Corporation Ltd. (CZN) to the Board on April 24, 2019 for Water Licence (Licence) MV2019L2-0006 and Land Use Permit (Permit) MV2019C0011 for mineral exploration activities at the Prairie Creek Mine. These applications were for renewal of Licence MV2001L2-0003 and Permit MV2012C0008.

1.0 List of Abbreviations

Anniversary Date	Effective date of Licence as seen on the Licence cover page
Applicant	Canadian Zinc Corporation Limited OR CZN
Applications	CZN's submissions in support of Water Licence MV2019L2-0006 and Land Use Permit MV2019C0011
CanNor	Canadian Northern Economic Development Agency
DFN	Dehcho First Nations
DFO	Department of Fisheries and Oceans
DIAND	Department of Indigenous Affairs and Northern Development
DKFN	Deninu Kue First Nation
EA/EIR	Environmental Assessment/Environmental Impact Review
ECCC	Environment and Climate Change Canada
FRMC	Fort Resolution Métis Council
GNWT	Government of the Northwest Territories
GNWT-ENR	Government of the Northwest Territories – Environment and Natural Resources
IR	Information Request
Inspector	Government of the Northwest Territories – Environment and Natural Resources – Water Resource Officer (Inspector) OR Government of the Northwest Territories – Lands – Resource Management Officer (Inspector)
Licence	Water Licence MV2019L2-0006
LKDFN	Łutsel K'e Dene First Nation
LKFN	Łııdlıı Kúę First Nation
MVEIRB	Mackenzie Valley Environmental Impact Review Board
MVLUR	Mackenzie Valley Land Use Regulations
MVLWB or Board	Mackenzie Valley Land and Water Board
MVRMA	<i>Mackenzie Valley Resource Management Act</i>
Minister	Minister of Environment and Natural Resources for the Government of the Northwest Territories OR Minister of Lands for the Government of the Northwest Territories
NSMA	North Slave Métis Association
NWTMN	Northwest Territory Métis Nation
Party	As per the Board's <i>Rules of Procedures</i>
Permit	Land Use Permit MV2019C0011
Project	Prairie Creek Mine Exploration
Review Board	Mackenzie Valley Review Board
Reviewer	As per the Board's <i>Rules of Procedures</i>
SKFN	Sambaa K'e First Nation
Standard Template	Board's <i>Standard Land Use Permit Conditions Template</i>
YKDFN	Yellowknives Dene First Nation

2.0 Summary of Application(s)

On April 24, 2019, CZN submitted Applications for a Licence MV2019L2-0006 and Permit MV2019C0011. These Applications are for renewal of Licence MV2001L2-0003 and Permit MV2012C0008, and proposed to continue previously permitted and licenced activities unchanged. The previous Permit and Licence were for mineral exploration activities at the Prairie Creek Mine, specifically, development of an underground decline, and treatment of mine water emanating from an existing portal at the mine. These activities are located within a Non-Federal area.

3.0 Regulatory Process

3.1 Environmental Assessment: EA01-003

An EA was conducted for this Project in 2001¹. Since that time, CZN applied for several amendments to the Water Licence, which were screened by the Board but not referred to EA. No changes to the Project were proposed by CZN in the Applications, therefore findings of the EA were not affected by the Applications. Preliminary Screening exemption is discussed later in these reasons.

3.2 Details of the Regulatory Process

On April 24, 2019, CZN submitted Applications for a Licence MV2019L2-0006 and Permit MV2019C0011. The Applications were deemed incomplete by Board staff on May 3, 2019.² On July 9, 2019, additional information was received from CZN, and the Applications were subsequently deemed complete and the review commenced on July 19, 2019. A draft Licence and Permit were distributed for reviewer comment with the Applications. The drafts were based on standard conditions issued by the Board for similar projects, and conditions of the existing Permit and Licence.

By August 7, 2019, comments and recommendations regarding the Applications were received by the Board from the following parties: CZN, ECCC, GNWT-ENR, GNWT-Lands, Board Staff, and Racher Consulting on behalf of NDDB and LKFN. On August 14, 2019, CZN responded to the parties' information requests.

On August 29, 2019, the Board met to make decisions regarding the Applications.

4.0 Legislative Requirements

In conducting the review process for the Applications as described in Sections 2 and 3 above, the Board has ensured that all applicable legal and procedural requirements have been satisfied, as required by section 62 of the MVRMA and as outlined below.

4.1 General

The use of land, water, and the deposit of waste proposed is of a nature contemplated by the MVRMA and the *Waters Act*.

As this Project is located on a Non-Federal Area, the MVRMA and *Waters Act* apply.

¹ See the Review Board's [Public Registry for EA01-003](#)

² See MVLWB Letter – [WL Application Incomplete](#), and [LUP Application Incomplete](#) dated May 3, 2019.

4.2 MVRMA Part 3: Duty to Consult (Aboriginal Matters)

In exercising its authority under the MVRMA, generally, the Board must ensure that the concerns of Aboriginal people have been taken into account as per paragraph 114(c) of the MVRMA. It must also consider the importance of conservation to the well-being and way of life of Aboriginal peoples of Canada, as per paragraph 60.1(a) of the MVRMA, specifically those to whom section 35 of the *Constitution Act, 1982* applies and who use an area of the Mackenzie Valley. Accordingly, the Board works with applicants, affected parties (including Aboriginal organizations/governments), and other parties (such as other boards and regulators) to ensure that potential impacts of proposed projects are understood and carefully considered before decisions are made with respect to the issuance of Permits and Licences.

In order to address the question of Aboriginal consultation it is first helpful to understand the general process through which the Board considers an application.^{3,4} Following the initiation of engagement and the submission of an application, a proposed project goes through several stages in the Board's approval process. The application is reviewed to ensure that all necessary information is included and to confirm that the right types of Permit and Licence have been applied for. This check for completeness is completed within ten days of receipt.

The application and supporting documents are uploaded to the Board's webpage and then an application package is distributed to stakeholders, including appropriate federal and territorial government departments and agencies; landowners; affected communities and Aboriginal organizations; Renewable Resource Boards; heritage regulators; and other interested parties. For the distribution list that the Board used, see Table 1 below:

Table 1: Organizations on the Distribution List for the Applications

Acho Dene Koe First Nation	GNWT - Lands - South Slave Region - Fort Smith
Canadian Northern Economic Development Agency	GNWT - MACA
CanNor NWT Region	Hamlet of Fort Liard
CanZinc Corporation	Hamlet of Fort Providence
CPAWS - NT Chapter	INAC - CARD
Deh Cho Land Use Planning Committee	INAC - NWT Inspectors
Deh Gah Got'ie Dene Council	INAC - Yellowknife
Dehcho First Nations	Ka'a'gee Tu First Nation
Dene Nation	Katlodeeche First Nation
Dene Tha' First Nation	Liard First Nation (Yukon)
Digaa Enterprises Ltd.	Liidlii Kue First Nation (Ft Simpson)
Environment and Climate Change Canada	Mackenzie Valley Environmental Impact Review Board
Fisheries and Oceans Canada	Naha Dehe Dene Band
Fort Providence Metis Council #57	North Slave Metis Alliance
Fort Providence Resource Management Board	NWT- OROGO
Fort Simpson Metis Local 52	Parks Canada

³ See www.mvlwb.com → Resources → Policies and Guidelines: [MVLWB Guide to the Land Use Permitting Process](#) (2013).

⁴ See www.mvlwb.com → Resources → Policies and Guidelines: [Guide to Completing Water Licence Applications to the Mackenzie Valley Land and Water Board](#) (2003).

Forward Mining	Pehdzeh Ki First Nation (Wrigley)
McDonald, Bruce	Racher Consulting
Carey, Thomas	Ross River Dena Council
GLWB	Sambaa Ke First Nation (Trout Lake)
GNWT - ECE	Snap Lake Environmental Monitoring Agency - SLEMA
GNWT - ENR	Tł̨chq̨ Government
GNWT - ENR - Deh Cho Region	Tł̨chq̨ Lands Protection Department
GNWT - ENR - South Slave Region - Fort Smith	Transport Canada
GNWT - Health	T̨h̨ets'ek'ehdeli First Nation (JMR)
GNWT - INF	Wek' eezhii Renewable Resources Board
GNWT - ITI	West Point First Nation
GNWT - Lands	Wek'èezhii Land and Water Board
GNWT - Lands - Dehcho Region	Parbery, David
GNWT - Lands - Hay River Region	
GNWT - Lands - North Slave Region	

The Board requested that reviewers provide comments with respect to the Applications and associated management plans. For a Type A Permit, as was the case in this Application, within 42 days of receipt of a complete application, unless additional information is required, the Board will either: (a) issue a Permit with conditions; (b) conduct a hearing under section 24 of the MVRMA or require that further studies or investigations be made; (c) refer it to the MVEIRB for environmental assessment; or (d) refuse to issue the Permit if a requirement set out in section 61 or 62 of the MVRMA has not been met or for any other reason as provided for in legislation. For a Type B Licence, as was the case in this Application, within nine months the Board shall make a decision. When the review is completed, comments are forwarded to the applicant for a response.

4.2.1 The Board Role in Consultation

The Board's requirements for engagement are set out in its *Engagement and Consultation Policy* (the Policy).⁵ The Policy was developed to ensure that the Board's obligations for achieving meaningful consultation (as set out by the land claims and applicable legislation) with all affected parties, including Aboriginal groups in the Mackenzie Valley, are met and consultation results clearly articulated. The Policy has three broad objectives; to guide applicants in proactive engagement related to land and water applications; to assist the Board to meet its own statutory requirements by providing a forum for consultation on concerns and proposed mitigations; and to assist in ensuring the adequacy of Crown consultation.

The core of the Policy is as follows:

- 1) To require proponents to initiate dialogue and engagement planning with affected parties, particularly affected Aboriginal organizations/governments, in advance of an application with the goals of:
 - explaining the project;

⁵ See www.mvlwb.com → Resources → Policies and Guidelines: [MVLWB Engagement and Consultation Policy](#) (June 1, 2013).

- identifying concerns and potential environmental impacts (including any potential for impacts to Aboriginal and treaty rights);
 - addressing concerns raised; and
 - ensuring appropriate levels and types of engagement are carried out over the life of an authorization or project.
- 2) To apply consultative approaches throughout a proceeding, which assist affected parties to meaningfully contribute to the assessment of impacts on the environment and the establishment of appropriate mitigations in order for the Boards to meet statutory responsibilities pursuant to the MVRMA and the Waters Act and their regulations.
 - 3) To assist in ensuring, and if necessary, rule on the adequacy of Crown consultation before making a final decision or recommendation, taking into account information gathered during proponent engagement and through its consultative processes.

4.3 MVRMA Part 3 and 4 and Waters Act: Land and Water Regulation and MVLWB

The Board has jurisdiction to issue this Licence and Permit as per subsection 60(1.1) of the MVRMA.

4.3.1 General

The Board has considered the people and users of the Mackenzie Valley, and any traditional knowledge and scientific information that was made available to it during this regulatory proceeding, as per section 60.1 of the MVRMA.

4.3.2 Public Notice

Notice and copies of the Applications was given to fulfill sections 63 and 64 of the MVRMA. The Board is satisfied that a reasonable amount of time was given to communities, First Nations, and the public to participate in this regulatory process by making submissions to the Board.

4.3.3 Existing Licences

With respect to 26(5)(a) of the *Waters Act*, no other Licensees contacted the Board during the statutory period, and there are no applicants with precedence in the watershed as per subsection 72.26(1) of the MVRMA/59(1) of the *Waters Act*. The Board is satisfied that the granting of this Licence will not adversely affect, in a significant way, any existing Licensee if compliance with the Licence occurs.

4.3.4 Compensation to Existing Water Uses

Paragraph 26(5)(b) of the *Waters Act* prohibits the issuance of the Licence unless the Board is satisfied that appropriate compensation has been or will be paid by the applicant to persons who would be adversely affected by the use of waters, or deposit of waste proposed by the applicant, at the time when the applicant filed its application with the Board.

The Board received no claims for compensation. Provided compliance with the Licence conditions takes place, the Board finds that there are no water users or persons listed in paragraph 26(5)(b) of the *Waters Act* who will be adversely affected by the use of waters or the deposit of waste proposed.

4.3.5 Water Quality Standards

With regards to 26(5)(c)(i) of the *Waters Act*, the Board is satisfied that compliance with the Licence conditions will ensure that waste will be collected and disposed of in a manner which will maintain water quality consistent with applicable standards and the Board's *Water and Effluent Quality Management Policy*.

4.3.6 Effluent Quality Standards

There are no effluent quality standards prescribed in the Waters Regulations. The Board is nonetheless satisfied that the effluent quality standards set out in the Licence are consistent with the Board's *Water and Effluent Quality Management Policy* and will protect the receiving waters and environment.

4.3.7 Financial Responsibility

The Board must satisfy itself of the financial responsibility of CZN under paragraph 26(5)(d) of the *Waters Act* before it can issue the Licence.

No concerns were raised by reviewers regarding considerations related to paragraph 26(5)(d).

As a result, and for the reasons set out above, the Board is satisfied that the financial capacity of the Applicant, in this case, is adequate and meets the requirements of paragraph 72.03(5)(d) of the MVRMA/26(5)(d) of the *Waters Act*.

4.3.8 Minimization of Adverse Effects

With regards to subsection 27(2) of the *Waters Act*, it is the opinion of the Board that compliance with the Licence will ensure that any potential adverse effects on other water users, which might arise because of the issuance of the Licence, will be minimized.

4.3.9 Time Limit

The Board is satisfied it has adhered to 48(1) of the *Waters Act*, which requires it to make a decision within a period of nine months after the day on which an application is made or a notice advertised as per subsections 43(1) and 43(2) of the *Waters Act*.

4.4 MVRMA Part 5: Environmental Review

4.4.1 Preliminary Screening

CZN indicated in the cover letter for their Applications that due to the fact the Applications were for renewal and proposed no changes to activities, they were of the opinion the Applications were exempt from preliminary screening. In their comments on the Applications, GNWT-Lands indicated they were in agreement that the Applications were exempt. The Board confirmed the activities associated with the Applications were exempt from preliminary screening based on Part 1, Schedule 1, section 2 of the Exemption List Regulations to the MVRMA. Consequently, no preliminary screening was conducted.

5.0 Decision – Water Licence MV2019L2-0006

In making its decision and preparing these Reasons for Decision, the Board has reviewed and considered:

- 1) The comments and recommendations made during the regulatory process;
- 2) The evidence and submissions from CZN received by the Board;
- 3) The written comments and submissions from parties received by the Board; and
- 4) The Staff Report prepared for the Board.

Having due regard to the facts, circumstances, and the merits of the submissions made to it, and to the purpose, scope, and intent of the MVRMA and the *Waters Act*, the Board has determined that Licence MV2019L2-0006 should be issued, subject to the scope, definitions, conditions, and term contained therein. The Board's determinations and reasons for this decision are set out below.

The scope, definitions, conditions, and term set forth in the Licence have been developed to address the Board's statutory responsibilities and the concerns that arose during the regulatory process. The Reasons for Decision set out below focus on the major concerns and issues raised by parties, including those that were the subject of substantive argument submitted by one or more parties. They also address evidence which resulted in the inclusion of new or revised conditions that differ from those in the existing Licence MV2001L2-0003.

The format of the Licence has been reorganized from Licence MV2001L2-0003, with minimal content changes. These changes modernize the Licence and enhance its consistency with other licences for similar undertakings in the Northwest Territories and regulated under the *Waters Act*. Site-specific conditions were included where necessary.

5.1 Term of Licence

CZN has applied for a term of seven years for the Licence, to match the potential term of the Permit applied for at the same time.

Subsection 26(2) of the *Waters Act* allows for a Licence term of not more than 25 years or the duration of the undertaking. No comments were received which raised concern with the term applied for by CZN. Considering this, and as the Licence and Permit are closely linked, the Board decided to continue the practice of setting the Licence term to coincide with that of the Permit, and therefore set the term of the Licence for seven years from the date of issuance which takes into account the five-year term of the Permit, plus the possibility of a two-year extension of the Permit's term.

5.2 Part A: Scope and Definitions

Part A of the Licence contains the scope and definitions for terms used throughout.

Scope

The scope of the Licence ensures the Licensee is entitled to conduct activities which have been applied for and screened by the Board. In setting out the scope of the Licence, the Board endeavoured to provide enough detail to identify and describe the authorized activities, without be unduly restrictive or prescriptive, and to allow for project flexibility throughout the life of the Permit. The scope of the Licence is unchanged from the scope of the previous Licence, as CZN did not request any changes to the scope of activities. No comments were received from reviewers specific to the scope of the Licence.

Part A, conditions 1(b) through 1(e) are consistent with previous Licences issued by the Board. These conditions ensure that the scope of the authorization includes all water uses and deposits of waste associated with the Project, reflect and comply with all applicable legislation for the life of the authorization, and consider and incorporate scientific and Traditional Knowledge where available in the Licensee's effort to protect the environment.

GNWT – ENR suggested that for consistency the Board change the word “deposit” of waste in the scope to “discharge”, as it is a defined term in the Licence. The Board concurred with the recommendation.

Definitions

The Board defined items in the Licence to ensure a common understanding of conditions, to avoid future differences in interpretation, and to use wording similar to that found in previously issued Licences. Where appropriate, the Board changed standard wording, or carried over Project-specific definitions from the previous Licence.

GNWT-ENR submitted comments related to definitions which relate to a current review of potential standard Licence conditions, which are yet to go to the full Mackenzie Valley Land and Water Board for approval. The Board determined to maintain definitions in the Licence as-is, and will consider GNWT-ENR's comments for future standard Licence conditions at the appropriate time.

GNWT-ENR noted that the term “significance threshold” was defined but does not occur in the Licence. The definition was removed accordingly.

5.3 Part B: General Conditions and Schedule A

Part B and Schedule A of the Licence contain general administrative conditions regarding compliance and conformity with the *MVRMA* and *Waters Act*, and are consistent with standard conditions found in previous Licences issued by the Board.

Part B, condition 5, clarifies that all references to policies, guidelines, codes of practice, statutes, regulations or other authorities shall be read as a reference to the most recent versions, unless otherwise denoted. This standard practice allows for flexibility in Licence conditions when documents are updated during the life of the Licence.

This section addresses conformity and compliance with submissions to the Board. Annual review and submission of major updates or changes to management plans are required by Part B, condition 9, for Board approval. Such revisions must be approved by the Board prior to the implementation of activities not identified in existing, approved plans. This condition ensures that all applicable plans are regularly reviewed and updated so they reflect changes in technology and/or changes and phases of the project throughout the life of the authorization.

GNWT-ENR submitted a number of comments on the conditions contained in this section which relate to a review of potential standard water Licence conditions. As described above the Board determined that decisions related to as-yet approved standard conditions are not appropriate for consideration for this specific Licence. As such, the Board maintained status quo and kept conditions similar to the previous licence and other licences issued by the Board for similar scale projects in the Mackenzie Valley. GNWT-ENR's comments related to standard conditions, use of schedules, and

other matters will be duly considered by the full Mackenzie Valley Land and Water Board at the time when standard Licence conditions are brought before them for decision.

Annual Water Licence Report

The requirements for the Annual Water Licence Report are outlined in Part B, condition 19, and Schedule A, condition 1. The purpose of the Annual Water Licence Report is to provide the Board and all stakeholders the opportunity to be annually updated on project components and activities, and to provide a platform for stakeholders to submit comments, observations, feedback, and questions as necessary. The requirements are intended to provide clarity and summarize information already captured through existing submissions; they are not meant to be onerous. The Board organized these requirements to coincide with the layout of the Licence and to be consistent with recently issued licences.

Part B, condition 20: Engagement

The Board assesses engagement adequacy of applications through the Board's *Engagement Guidelines for Applicants and Holders of Water Licences and Land Use Permits*, and the Board's *Engagement and Consultation Policy*. The Board notes that CZN's pre-engagement for the Applications was determined to be in accordance with the Guidelines and Policy. CZN included an Engagement Plan and Log in the Applications. No concerns were raised by reviewers with the Plan or Log during review of the Applications.

The Board has approved the Engagement Plan because it meets the Board's Guideline and Policy, and sufficiently reflects the scope of the proposed activities.

5.4 Part C: Conditions Applying to Security Requirements and Schedule B

The Board is authorized to require the Licensee to provide security to the Minister by subsection 35(1) of the *Waters Act*. Subsection 35(2) of the *Waters Act* specifies how the security may be applied.

Part C of the Licence, by reference to Schedule B, sets the level of security to be maintained by the Licensee and sets out requirements related to posting and updating security. As in other licences, the Board may request a security update from the proponent at any time, and may adjust the security amount at any time, based on available information. Specifically, conditions in Part C stipulate that the Board can revise the security deposit and that the Licensee will post the revised deposit within 90 days following the Board's decision. This condition pertains to both increases and reductions in security. The conditions in this section are similar to those found in other Licences issued by the Board.

The Board has determined that the total security deposit amount shall be \$446,986; \$210,648 is required under the Licence and \$236,338 is required under the Permit. A detailed explanation of how the Board determined the security deposits for these two instruments is provided in Appendix 1: Reclamation Security of these Reasons for Decision. They are discussed together since the estimates deal with the same project and are intimately linked.

5.5 Part D: Conditions Applying to Water Use

Part D of the Licence contains conditions related to water use for the Project. These are consistent with standard conditions found in previous Licences issued by the Board.

The maximum quantity of water that can be withdrawn is 204m³ per year, as was applied for by CZN. Board staff queried CZN regarding this amount, due to the fact that it did not align with water use reported in the most recent Annual Report submitted under the existing Licence. CZN clarified that their water use associated with the activities specifically applied for is smaller than overall site water use, and noted that if the Board wanted to include all site water use, CZN would request a larger amount, however CZN did not provide another amount. Considering this, the Board decided to grant what was requested in the Application, as it was the only specific amount requested by CZN. Water use associated with non-exploration related activities will need to be reported in accordance with the mine Licence MV2008L2-0002.

5.6 Part E: Conditions Applying to Waste and Water Management and Schedule C

Part E and Schedule C of the Licence contain conditions applying to waste and water management activities for the Project and is consistent with standard conditions included in previous Licences issued by the Board. Site-specific conditions were carried over from the previous Licence. No changes to EQC were made as a result of the Application. This section of the Licence largely remains unchanged from the previous Licence, with noted exceptions.

Management Plans and Monitoring Programs

Part E, condition 3: Waste Management Plan

The Boards' authority to regulate the management of waste is described in subsection 26(1) of the MVLUR and sections 11 and 27 of the *Waters Act*. As such, the Board developed, and approved, *Guidelines for Developing a Waste Management Plan*.⁶ These guidelines can be applied to a wide range of projects and are intended to ensure that all waste management activities specific to each project are carried out in a way that is consistent with best practices and applicable guidelines to minimize waste released from the Project. Waste Management Plan is a defined term in the Licence, ensuring that the required Plan adheres to the Board's Guidelines.

Submittal and compliance with a Waste Management Plan is standard for Licences issued by the Board. CZN included a Waste Management Plan in the Application.

Several reviewers requested further detail regarding incineration practices. CZN responded that they plan to replace the incinerator with a newer model. The Board notes that CZN will need to revise and re-submit the Waste Management Plan to reflect this change when it occurs.

GNWT-ENR raised several minor concerns with information which was not included in the Waste Management Plan that should have been, such as a comprehensive list of types and quantities of expected waste, details regarding incineration, monitoring, and clarity regarding storage location and disposal plans for contaminated snow and water.

⁶ See www.mvlwb.com → Resources → Policies and Guidelines: [MVLWB Guidelines for Developing a Waste Management Plan](#) (March 31, 2011).

The Waste Management Plan was given interim approval by the Board, with CZN being required to revise and re-submit the Plan within 90 days of issuance of this Licence to reflect updates as noted during the public review, to meet the applicable guidelines, and to include the following:

- a comprehensive list of types and quantities of expected waste as requested by GNWT-ENR in Comment 44 in the Review Comment Table
- details regarding incineration as requested by GNWT-ENR in comment 45 in the Review Comment Table
- details regarding monitoring as requested by GNWT-ENR in comment 46 in the Review Comment Table
- details regarding storage location and disposal plans for contaminated snow and water as requested by GNWT-ENR in comment 47 in the Review Comment Table

The revised Plan will be considered approved upon written confirmation of conformity from Board staff.

Part E, Conditions 4 and 5: Effluent Treatment Plan (ETP) and Minewater Treatment Contingency Plan (MTCP)

Both of these Plans are carry-overs from the previous Licence, and were submitted by CZN in accordance with that Licence. The Plans were distributed for review with the renewal Applications due to the timing of the Applications and upcoming expiry of the existing Licence.

The joint submission from NDDDB/LKFN suggested changing the name of the plan from “Effluent Treatment Options Plan” and some minor changes to the requirements for the plan in the schedule. CZN agreed with the recommendations; as such the Board decided to include them as requested. NDDDB/LKFN further suggested the Plan be revised to reflect the suggested changes. Those changes include; a) reference what happens when effluent is not compliant, b) describe where water quality monitoring results are reported, c) contain a commitment to keep improving the system as needed, and d) reference where system improvements will be reported. CZN agreed to these recommendations.

The Board approved the ETP on an interim basis, with CZN being required to revise and re-submit the ETP based on the above noted recommendations and CZN’s agreement to implement them. The revised ETP is to be re-submitted within 90 days of issuance of this Licence. The revised ETP will be considered approved upon written confirmation of conformity from Board staff.

In their comments on the MTCP, GNWT-ENR noted that the Plan did not contain management options outlining how non-compliant water from the polishing pond would be managed to prevent release to the environment, and recommended the Plan not be approved by the Board until CZN provides this information. CZN did not respond to this comment. Furthermore, GNWT-ENR requested data supporting CZN’s assertion that surface water runoff does not affect the water treatment system. While CZN did respond to this recommendation, they did not adequately respond to the request for information.

For these reasons, the MTCP was given interim approval by the Board, with CZN being required to revise and re-submit the MTCP within 90 days of issuance of this Licence to include the following:

- management options outlining how non-compliant water from the polishing pond will be managed to prevent release to the environment; and
- information to support CZN's assertion that surface water runoff does not affect the treatment system.

The revised MTCP will be considered to be approved upon written confirmation of conformity from Board staff.

Part E, condition 6 – Geochemical Verification Program

Due to uncertainty related to potential leachate from waste rock associated with development of the 2nd Decline, GNWT-ENR recommended inclusion of a simple Geochemical Verification Program to confirm and ensure that deposit of the additional waste rock does not result in negative effects. CZN opposed this recommendation, noting that waste rock was previously tested prior to deposit, and a similar process would be implemented in the case of 2nd Decline development. The Board noted that Geochemical Verification Programs are commonly required in Licences for similar projects regulated by the Board, and considering CZN is amenable to testing the rock, not an unreasonable requirement. As a result, the Board included a Geochemical Verification Program in the Licence.

Operation and Inspection of Structures and Facilities

The conditions in this section were carried over from the previous Licence. CZN noted that a catchment pond control structure was already in place and suggested the condition be deleted. The Board noted the condition also stipulated maintenance of the structure, so reworded the condition to that effect and retained it.

Geotechnical assessments of both the polishing pond and tank farm were required by the previous Licence. CZN noted that these assessments were completed and therefore suggested the conditions could be deleted. The Board noted that retention of the conditions does not mean CZN needs to re-do work, simply that they can verify with the Inspector that the assessments remain relevant. The Board decided to retain the conditions to grant the inspector a tool to require CZN to reassess these structures if required.

Discharge Locations and Rates

No changes were made to this section of the Licence from the previous Licence.

Effluent Quality Criteria

No changes to Effluent Quality Criteria were proposed by CZN in the Application, nor were any suggested by reviewers. As such no changes were made to the Effluent Quality Criteria in the Licence.

Condition 17 is a standard condition used by the Board to ensure water toxic to aquatic life does not enter the receiving environment. This condition was not included in the previous Licence, however toxicity testing at SNP station 3-4 was required. This condition grants the ability to the Inspector to enforce this requirement. In response to ECCC's comment that toxicity testing should occur at station 3-4, CZN suggested that the testing should occur at 3-6. The purpose of the toxicity testing is to verify that the treated effluent being discharged from the site to the receiving environment is not acutely

toxic to aquatic life. SNP 3-4 is the first post-treatment station and is designated as the compliance point related to EQC and toxicity testing needs to be completed at this station. Moving the toxicity testing downstream to SNP 43-6 results in toxicity testing within the receiving environment and does not satisfy the intent of this toxicity testing to verify the quality of the treated effluent prior to discharge.

Condition 20 – EQC Exceedance is a standard condition used to ensure non-compliant water does not enter the receiving environment. CZN raised concern with inclusion of this condition in the Licence, noting that ceasing discharge is not possible with the current configuration of water treatment at the site. The Board noted that compliance related to the maximum average limit for Zinc has been an ongoing issue with this Licence, which is why the MTCP and ETP were required by the Board. The fact that CZN cannot maintain compliance with the Licence is not adequate justification to change Licence conditions. The Board noted and appreciates CZN’s ongoing efforts to address this problem, and looks forward to receiving updated results of 2019 treatment, which hopefully has shown an improvement and brought CZN into compliance with the Licence. The Board decided to retain this condition and encourages CZN to work to improve treatment and control structures at the site to ensure compliance with the Licence.

5.7 Part F: Conditions Applying to Contingency Planning

Part I of the Licence contain conditions related to spill contingency planning and reporting, reclamation of spills and unauthorized discharges, and emergency response for the Project. The purpose of this part is to ensure that CZN is fully prepared to respond to spills and unauthorized discharges. The planning and reporting requirements in this part ensure that CZN has identified the lines of authority and responsibility, has an action plan(s) for responses to spills and unauthorized discharges, and has established reliable reporting and communication procedures. This will ensure that any spills or unauthorized discharges are effectively controlled and remediated, with the goal of preventing or limiting damage to the receiving environment. The conditions in Part I are consistent with standard conditions found in previous Licences issued by the Board.

Part F, condition 2: Spill Contingency Plan

Spill Contingency Plan is a defined term in the Licence, referencing the Indian and Northern Affairs Canada’s *Guidelines for Spill Contingency Planning*. CZN included a Spill Contingency Plan in the Applications. GNWT-ENR requested that the Plan be updated to include maps outlining where spill equipment is located, where hydrocarbons and chemicals are stored, and potential pathways for spills. GNWT-ENR also requested the plan be updated to include the quantity and location of spill kits on site. CZN did not respond to this request.

The Spill Contingency Plan was given interim approval by the Board, with the requirement that CZN revise and resubmit that Plan within 90 days of issuance of the Licence to reflect the guidelines, and to include the following:

- maps outlining where spill equipment is located, where hydrocarbon and chemicals are stored, and potential pathways for spills; and
- the quantity and location of spill kits.

The revised Spill Contingency Plan will be considered approved upon written confirmation of conformity from Board staff.

5.8 Part G: Conditions Applying to Closure and Reclamation and Schedule D

Part J and Schedule D of the Licence contain conditions applying to closure and reclamation of the Project. The conditions in this section were updated to reflect standard closure conditions contained in similar licences issued by the Board. Closure requirements in Schedule D were carried over from the previous Licence, and combined with modern standards. The Board notes that all Closure and Reclamation Plans (including Interim and Final) shall be in accordance with the Mackenzie Valley Land and Water Board and Aboriginal Affairs and Northern Development Canada's *Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories* (Closure Guidelines).⁷ CZN included a Draft Closure and Reclamation Plan in the Applications.

CZN raised concern with the changes to the closure and reclamation section of the draft Licence, suggesting they were excessive considering the scope of the undertaking. CZN also noted that conditions related to progressive reclamation may cause problems if CZN begins construction under the mining Licence MV2008L2-0002. The Board notes that if CZN is to reach that stage in the project and activate conditions under the mining licence it is expected that this Licence would be closed at that point. As noted in Appendix 1, CZN's desire to maintain this Licence separately from the mining Licence creates overlap, and the Board encourages CZN to address this issue by applying for an amendment to MV2008L2-0002 which would bring all activities at the site under one Licence, eliminating the overlap problem.

Regarding CZN's concerns related to the scope of the Application and whether closure conditions are excessive, the Board notes that these conditions are typical of any Licence issued by the Board for advanced exploration projects. Although it is not preferential that CZN maintains a separate exploration licence for the mine site, as long as this is the case, the Licence must include closure conditions to cover the licenced activities.

In their comments on the Application, ECCC suggested increasing the time for CZN to submit a closure and reclamation plan, due to uncertainty related to planned operations at the site. The Board decided that additional time, up to one year, was appropriate.

Due to the fact that the Plan was submitted in draft form, it was not considered for approval.

5.9 Annex A: Surveillance Network Program

Annex A of the Licence contains conditions applying to the Surveillance Network Program (SNP). The SNP details the sampling and monitoring requirements related to compliance with numerous conditions and plans required by the Licence. Requirements for measuring flows, volumes, and meteorological data are based on standard water licence conditions as are the reporting requirements.

CZN noted that as sampling does not occur throughout the entire year, monthly reporting as required by the standard condition might not make sense. The Board noted this concern and suggests that CZN can submit a letter noting that conditions at site are frozen and sampling will not occur for the winter.

⁷ See www.mvlwb.com → Resources → Policies and Guidelines: [MVLWB/AANDC Guidelines for the Closure and Reclamation of Advances Mineral Exploration and Mine Sites in the Northwest Territories](#) (DATE).

CZN noted that a Quality Assurance and Quality Control Plan, as required by Condition 6, may have been submitted previously. The Board noted this but due to the fact that the Licence is being renewed and minor changes to sampling parameters were included in the updates to the Licence, an updated QA/QC plan is required.

For station 1-1, CZN noted they were not previously required to meter flow, and simply estimated water use, which they suggest is minimal. The Board noted that as water use is limited by the Licence, metering of the water used is necessary to ensure compliance. This is a typical requirement of any Licence issued by the Board. The Board determined that requiring flow metering is reasonable for these reasons.

For Station 3-1, CZN suggested there was no need to sample nutrients and solids at this well as it is for freshwater, the Board therefore removed these parameters from the sampling requirements.

ECCC suggested making station 3-3 inactive, as CZN has indicated they do not intend to operate the pilot plant. CZN did not raise concern with this recommendation. For these reasons, the Board set the station to inactive.

CZN raised concern with some of the sampling parameters suggested by Board staff for the draft Licence. The Board noted that Board staff included typical monitoring parameters for comment. CZN suggested that sampling of Nutrients and Hydrocarbons in stations 3-4 to 3-7 was not necessary unless underground operations were occurring – the Board agreed with this statement and changed these stations accordingly.

Considering CZN's use of sulphate in treatment, the Board determined this parameter should be monitored at stations 3-4 to 3-7, but removed the requirement for monitoring of Major Ions from all stations. CZN also raised concern with sampling requirements for stations 3-8 to 3-11, noting that TDS, Nutrients, and Hydrocarbons were not necessary. The Board noted these statements and changed the sampling parameters accordingly.

ECCC recommended addition of an SNP station to record test results of tank farm water as required by Part E, Condition 18. CZN objected to this recommendation. Considering CZN is already required to sample this water, the Board determined recording this information in SNP reports would not be an onerous requirement, and added the station as recommended by ECCC.

5.10 Annex B: Table of Submissions

Annex B of the Licence contains a table that summarizes the information CZN is required to submit as required by the Licence conditions.

5.11 Annex C: Table of Revision History

Annex C of the Licence contains a table which identifies updates and tracks changes made to the Licence. This table is currently blank because this is a new Licence, but it will be updated throughout the life of the Licence.

6.0 Decision – Land Use Permit MV2019C0011

In making its decision and preparing these Reasons for Decision, the Board has reviewed and considered:

- 1) The comments and recommendations made during the regulatory processes;
- 2) The evidence and submissions from CZN received by the Board;
- 3) The written comments and submissions from parties received by the Board; and
- 4) The Staff Report prepared for the Board.

Having due regard to the facts, circumstances, and the merits of the submissions made to it, and to the purpose, scope, and intent of the MVRMA, the Board has determined that Permit MV2019C0011 should be issued, subject to the scope, definitions, conditions, and term contained therein. The Board's determinations and reasons for this decision are set out below.

The scope, definitions, conditions, and term set forth in the Permit have been developed to address the Board's statutory responsibilities and the concerns that arose during the regulatory processes. The Reasons for Decision set out below focus on the major concerns and issues raised by parties, including those that were the subject of substantive argument submitted by one or more parties.

The Permit has been modernized to enhance its consistency with other Permits for similar activities. Site-specific conditions were carried over from the previous Permit where applicable.

6.1 Term of Permit

CZN applied for a term of 5 years for the Permit. Subsections 26(5) of the MVLUR allows for a Permit term of not more than five years. No comments were made regarding the term of the Permit; therefore the Board granted the Permit for 5 years.

6.2 Part A: Scope of Permit

The scope of the Permit ensures the Permittee is entitled to conduct activities which have been applied for and screened by the Board. In setting out the scope of the Licence, the Board endeavoured to provide enough detail to identify and describe the authorized activities, without be unduly restrictive or prescriptive, and to allow for project flexibility throughout the life of the Permit. The scope remained unchanged from the previous Permit.

6.3 Part B: Definitions

The Board defined items in the Permit to ensure a common understanding of conditions, to avoid future differences in interpretation, and to use wording similar to that found in previously issued Permits. For the most part, the definitions used wording from the Board's *Standard Land Use Permit Conditions Template* (Standard Template). Where appropriate, definitions from the previous Permit were carried forward.

6.4 Part C: Conditions Applying to All Activities

Most conditions in the Permit are from the Board's Standard Template, and are not discussed in detail in these Reasons for Decision unless notable due to recommendations or concerns raised during the public review.

26(1)(a) Location and Area

GNWT-Lands recommended addition of a condition for a buffer zone between watercourses and drilling activity. CZN responded noting that drilling will occur from within the existing decline and

suggested the condition was therefore unnecessary. The Board concurred with CZN's position and decided not to include the condition.

26(1)(f) Control or Prevention of Ponding of Water, Flooding, Erosion, Slides, and Subsidence of Land

GNWT-Lands recommended inclusion of the Excavation and Embankments condition to ensure waste material piles are sloped appropriately. CZN did not raise an issue with this recommendation, and the Board agreed it was an appropriate condition for the Permit, so the condition was added.

26(1)(i) Storage, Handling, and Disposal of Refuse or Sewage:

A Waste Management Plan is a standard requirement for Permits issued by the Board. This Plan is intended to ensure that all waste management activities are carried out in a way that is consistent with best practices and applicable guidelines to minimize waste released from the Project. This Plan is also required under the Licence and the Board's reasons for including this Plan, and requiring revisions and re-submittals, are described above. The Board mirrored these conditions to the extent possible with the Licence requirements to ensure one submission will satisfy conditions of both the Licence and Permit.

26(1)(l) Security Deposit

The Board is authorized to require the Permittee to provide security to the Minister by subsection 32(1) of the MVLUR. Subsection 32(2) of the MVRMA specifies how the security may be applied.

The Board has included a requirement for security in the Permit. The Board's reasons associated with this section are provided in Appendix 1, in conjunction with reasons for security required by the Licence. The security deposits required by these two instruments are discussed together since the estimates deal with the same project and are intimately linked. The conditions included in this section are consistent with the Board's Standard Template.

26(1)(m) Fuel Storage

A Spill Contingency Plan is a standard requirement for All Permits issued by the Board. This Plan is intended to ensure that an action plan(s) for responses to spills and Unauthorized Discharges, and has established to effectively control and remediate spills and Unauthorized Discharges, with the goal of preventing or limiting damage to the receiving environment. This Plan is also required under the Licence and the Board's reasons for including this Plan, and requiring revisions and re-submittals, are described above. The Board mirrored these conditions to the extent possible with the Licence requirements to ensure one submission will satisfy conditions of both the Licence and Permit.

26(1)(q) Biological and Physical Protection of the Land

An Engagement Plan is a standard requirement for Permits issued by the Board. This Plan is intended to ensure adequate and effective engagement with potentially affected parties has occurred prior to the submission of the Applications (in the form of the Engagement Log) and is planned for throughout the life of the Project. This Plan is also required under the Licence and the Board's reasons for including this Plan, and requiring revisions and re-submittals, are

described above. The Board mirrored these conditions to the extent possible with the Licence requirements to ensure one submission will satisfy conditions of both the Licence and Permit.

7.0 Conclusion

Subject to the scopes, definitions, conditions, and terms set out in the Licence and Permit, and for the reasons expressed herein, the MVLWB is of the opinion that the land-use activities, water use, and waste disposal associated with the Project can be completed by Canadian Zinc Corporation Ltd. while providing for the conservation, development, and utilization of waters in a manner that will provide the optimum benefit for all Canadians and in particular for the residents of the Mackenzie Valley.

Water Licence MV2019L2-0006 and Land Use Permit MV2019C0011 contain provisions that the Board deems necessary to ensure and monitor compliance with the MVRMA, *Waters Act*, and the Regulations made thereunder, and to provide appropriate safeguards in respect of CZN's use of the land and water affected by the Licence.

SIGNATURE

Mackenzie Valley Land and Water Board



Mavis Cli-Michaud, Chair

August 29, 2019

Date

Appendix 1: Reclamation Security for the Project

1.0 Introduction

CZN included security estimates for the Permit and Licence with their Applications. In their cover letter for the Applications, CZN made reference to Surface Lease 95F/10-5-5 (the Lease), which details CZN's obligations related to reclamation of the mine site, and noted that due to the conditions of the Lease, they were of the opinion their liability for site restoration is limited. This consideration was the subject of a previous review and Board decision related to security obligations associated with CZN's Mining Licence MV2008L2-0002 and Permit MV2008D0014⁸, which acknowledged the limitations to CZN's liability and set security for site reclamation accordingly. Discussion of the difficulties inherent with having overlapping Licences for the same mine site is included below with the Board's conclusions related to security.

1.1 CZN Evidence Submitted to the Board

CZN's estimate for land-related liabilities to be included under the Permit totalled \$50,076. The estimate was prepared using the Board's security worksheet for land use permits. CZN's estimate for water-related liabilities to be included under the Licence was prepared using the RECLAIM model, which is the model recommended and used by the GNWT for their own security estimates. CZN's estimate for water-related liabilities totalled \$47,108.

1.2 GNWT-ENR – Evidence Submitted to the Board

As part of their submission to the Board, GNWT-ENR prepared and submitted a RECLAIM estimate of their own, which considered both land and water-related liabilities. GNWT-ENR noted that their "estimate considers the fact that there are some parts of the site that are not the responsibility of CZN as per the 2003 Abandonment and Restoration Plan"⁹. GNWT-ENR provided two estimated totals, one that considered the need for construction of a winter road to support remediation activities, and one which did not include this consideration. The total for the winter-road included estimate was \$786,986. Without the winter road, GNWT-ENR's estimate totalled \$446,986, with \$210,648 apportioned to water-related liability, and \$236,338 for land-related liability. GNWT-ENR acknowledged that their estimate was higher than CZN's, and noted that they had used version 7 of the RECLAIM model, which contains additional indirect and unit costs. GNWT-ENR further noted that their estimate included care and maintenance activities to maintain compliance with the water licence¹².

1.3 Discussion and Determinations

In response to GNWT-ENR's estimate, CZN argued that liability related to water emanating from the underground workings was not their responsibility¹⁰. In reviewing the copy of Surface Lease 95F/10-5-5 provided by CZN¹¹ during the above-noted proceeding related to security for the mine Licence and Permit, the Board noted it is not explicitly clear that CZN's statement related to water emanating from the underground workings is correct. The Board noted that Item 6 in the Abandonment and Restoration Plan attached to the Surface Lease stipulates that underground entrances "will be sealed in accordance with the Government of the Northwest Territories Mining Regulations"¹². This appears

⁸ See the Board's [May 21, 2015 Reasons for Decision](#) regarding security for MV2008L2-0002 and Permit MV2008D0014

⁹ GNWT-ENR Comment ID 48 in the Review Comment Table

¹⁰ CZN response to GNWT-ENR Comment ID 48 in the Review Comment Table

¹¹ See Annex A of CZN's [December 22, 2013 submission to the Board](#)

¹² See Annex A of CZN's [December 22, 2013 submission to the Board](#)

to suggest that impacts associated with the underground workings are, in fact, CZN's responsibility. The Board noted that the Surface Lease is an instrument administered by GNWT and held by CZN, and disagreements between the parties regarding obligations under the Surface Lease are between the parties, and do not involve the Board. However, the Board is obligated to include appropriate security requirements in the Licence and Permit, and had to consider the evidence on hand in making their determinations. The Board noted that GNWT-ENR acknowledged and based their estimate in consideration of the limited liability CZN holds due to the Surface Lease, and saw no reason not to accept that this assertion was based on an accurate interpretation of the Surface Lease, which is administered by GNWT.

What was not completely clear as a result of this proceeding is the level to which security for the Licence MV2019L2-0006 currently before the Board and the existing mine Licence MV2008L2-0002 overlap. This highlights an overarching problem with the exploration Licence MV2019L2-0006, which is that it overlaps with the site covered by mining Licence MV2008L2-0002, which is a much more comprehensive Licence that covers the entire site, and is intended to be the standalone Licence for the mine site. The Board is of the opinion that significant efficiency and advantage would be achieved if CZN applied to amend MV2008L2-0002 to include the activities associated with MV2019L2-0006, and then applied to close the smaller Type B Licence. There is no practical reason why both Licences need to exist. The Board therefore strongly encourages CZN to discuss this matter with Board staff and consider making an application which would remedy this problem of Licence overlap.

Regarding whether additional security should be paid to cover road construction, the Board noted that the primary mechanism to cover reclamation of the mine site is with Licence MV2008L2-0002, for which CZN has paid security, which covers the costs of removing materials, which included the assumption that a road would be required for said removal. It is unlikely a scenario will occur where reclamation of liabilities associated with Licence MV2019L2-0006 would not overlap with those under MV2008L2-0002, therefore, the Board determined requiring road-related liabilities be covered under both instruments unnecessary.

In consideration of the evidence submitted by GNWT-ENR and CZN, the Board decided to accept GNWT-ENR's estimates for land and water-related liabilities which did not include consideration for winter road construction. GNWT-ENR provided evidence which showed they had considered and taken into account CZN's limited site liability, and included consideration for care and maintenance activities, which the Board determined is a reasonable contingency to include. The Board set security in the Licence at \$210,648, and in the Permit at \$236,338, as recommended by GNWT-ENR.

The Board noted that due to the fact that CZN submitted their response to Board staff's incomplete letter for the Applications so soon before the expiry date of the Licence, the proceeding was conducted over a much shorter time period than would normally occur for a Type B Licence renewal. In a longer proceeding, there may have been opportunity for CZN and GNWT-ENR reach better consensus regarding security. The Board notes that Part C, Condition 3 of the Licence allows CZN to apply to change the security amount required by the Licence at any time. Similarly, a permittee can apply to the Board for amendments to any condition of a Permit in accordance with Subsection 26(2) of the MVLUR. The Board also notes that security could be revisited and updated in Licence MV2008L2-0002 if CZN chooses to proceed as advised and initiate a process to eliminate the need for the exploration Licence.