



7th Floor - 4922 48th Street,
 P.O. Box 2130, Yellowknife NT X1A 2P6

Tel: 867-669-0506 Fax: 867-873-6610
 www.mvlwb.com

Reasons for Decision

Issued pursuant to paragraph 40(2)(c) of the Mackenzie Valley Land Use Regulations (MVLUR) and Sections 72.25 and 121 of the *Mackenzie Valley Resource Management Act* (MVRMA) and sections 54 of the *Waters Act*

Water Licence and Land Use Permit Applications	
Preliminary Screener	MVLWB
File Number	MV2020L2-0003 and MV2020D0007
Company	Canadian Zinc Corporation
Project	Mining and Milling, Prairie Creek Mine, NT
Date of Decision	December 17, 2020

Table of Contents

1.0	List of Abbreviations	4
2.0	Summary of Application(s)	5
3.0	Regulatory Process.....	5
3.1	Environmental Assessment: EA0809-002	5
3.2	Post-Environmental Assessment Information Package	5
3.3	Details of the Regulatory Process	5
4.0	Legislative Requirements	8
4.1	General.....	8
4.2	MVRMA Consultation and Engagement	8
4.2.1	<i>Notifications and Initial Engagement</i>	<i>9</i>
4.2.2	<i>Aboriginal Parties and Their Concerns</i>	<i>9</i>
4.3	MVRMA Part 3 and 4 and Waters Act: Land and Water Regulation and MVLWB.....	10
4.3.1	<i>General.....</i>	<i>10</i>
4.3.2	<i>Public Notice.....</i>	<i>10</i>
4.3.3	<i>Water Use Fees</i>	<i>10</i>
4.3.4	<i>Existing Licences</i>	<i>10</i>
4.3.5	<i>Compensation to Existing Water Uses.....</i>	<i>10</i>
4.3.6	<i>Water Quality Standards.....</i>	<i>11</i>
4.3.7	<i>Effluent Quality Standards</i>	<i>11</i>
4.3.8	<i>Financial Responsibility</i>	<i>11</i>
4.3.9	<i>Minimization of Adverse Effects.....</i>	<i>12</i>
4.3.10	<i>Time Limit.....</i>	<i>12</i>
4.4	MVRMA Part 5: Environmental Review	12
4.4.1	<i>Environmental Assessment</i>	<i>12</i>
4.4.2	<i>Preliminary Screening</i>	<i>12</i>
5.0	Decision – Water Licence MV2020L2-0003	12
5.1	Term of Licence.....	15
5.2	Part A: Scope and Definitions	15
5.3	Part B: General Conditions and Schedule 1	17
5.4	Part C: Conditions Applying to Security Requirements and Schedule 2	22
5.5	Part D: Conditions Applying to Construction and Schedule 3.....	22
5.6	Part E: Conditions Applying to Waste Management and Schedule 4.....	23
5.7	Part F: Conditions Applying to Water and Wastewater Management and Schedule 5	27
5.8	Part G: Conditions Applying to Aquatic Effects Monitoring Program and Schedule 6	29
5.9	Part H: Conditions Applying to Contingency Planning.....	31
5.10	Part I: Conditions Applying to Closure and Reclamation	33
5.11	Part J: Conditions Applying to Modifications.....	34
5.12	Annex A: Surveillance Network Program.....	35
5.13	Annex B: Table of Submissions	38
5.14	Annex C: Table of Revision History	38
6.0	Decision – Land Use Permit MV2020D0007	39
6.1	Term of Permit	39
6.2	Part A: Scope of Permit	40
6.3	Part B: Defined Terms	40

6.4	Part C: Conditions Applying to All Activities	40
	26(1)(d) Methods and Techniques	40
	26(1)(i) Storage, Handling, and Disposal of Refuse or Sewage	41
	26(1)(l) Security Deposit	41
	26(1)(m) Fuel Storage	41
	26(1)(q) Biological and Physical Protection of the Land.....	41
7.0	Conclusion	42
Appendix 1: Reclamation Security for Prairie Creek Mine		43
1.0	Introduction	44
1.1	Summary of Evidence Submitted to the Board.....	44
2.0	Board Decision	47
2.1	Winter and All-Seasons Road.....	47
2.2	Tailings Backfill.....	47
2.3	Conclusion.....	47

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 (CZN) to the Board on May 13, 2020 for Water Licence (Licence) MV2020L2-0003 and Land Use Permit (Permit) MV2020D0007 for the Prairie Creek Mining and Milling Project.

A summary of the Applications is provided in Section 2.0 below, followed by the regulatory process in Section 3.0. Section 4.0 describes the legislative requirements applicable to this regulatory process, leading to the Board's decisions with supporting rationale in Sections 5.0 and 6.0.

1.0 List of Abbreviations

ADKFN	Acho Dene Koe First Nations
AEMP	Aquatic Effects Monitoring Program
ASR	All Season Road
Anniversary Date	Effective date of Licence as seen on the Licence cover page
ADKFN	Acho Dene Koe First Nation
Applicant	Canadian Zinc Corporation (CZN)
Applications	CZN's submissions in support of Water Licence MV2020L2-0003 and Land Use Permit MV2020D0007
CRP	Closure and Reclamation Plan
CZN	Canadian Zinc Corporation
DFN	Dehcho First Nations
EA	Environmental Assessment
ECCC	Environment and Climate Change Canada
EQC	Effluent Quality Criteria
GNWT	Government of the Northwest Territories
GNWT-ENR	Government of the Northwest Territories – Department of Environment and Natural Resources
GNWT-ITI	Government of the Northwest Territories – Department of Industry, Tourism, and Investment
GNWT-Lands	Government of the Northwest Territories – Department of Lands
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)
Intervenor	A reviewing Party that submits an intervention
Licence	Water Licence
LKFN	Łı́ı́ııı Kúęę First Nation
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, as the case may be
NDDB	Nahąą Dehé Dene Band
Party	As per the Board's <i>Rules of Procedures</i>
Permit	Land Use Permit
Project	Prairie Creek Mine
Review Board	Mackenzie Valley Environmental Impact Review Board
SSWQO	Site Specific Water Quality Objectives
SNP	Surveillance Network Program

2.0 Summary of Application(s)

On May 13, 2020, CZN submitted renewal Applications for Licence MV2020L2-0003 and Permit MV2020D0007 to conduct mining and milling at the Prairie Creek Mine.^{1,2} These activities are located within a non-federal area in the Dehcho. They are intended to replace existing Licence MV2008L2-0002 and Permit MV2008D0014.

3.0 Regulatory Process

3.1 Environmental Assessment: EA0809-002

On December 8, 2011, the Mackenzie Valley Environmental Impact Review Board (Review Board) released their Report of Environmental Assessment (EA) and Reasons for Decision on the Canadian Zinc Corporation proposed Prairie Creek Mine (EA0809-002).³ The Review Board concluded, pursuant to paragraph 128 (1)(a) of the MVRMA that the proposed development as described in the Report is not likely to have any significant adverse impacts on the environment or to be a cause of significant public concern. On June 8, 2012, the Review Board and CZN were informed that the federal Minister (the Minister of Indian Affairs and Northern Development) and Responsible Ministers would not be exercising their authority under section 130(1) of the MVRMA.

3.2 Post-Environmental Assessment Information Package

On December 18, 2011, the regulatory process for the Applications resumed as per subsection 72.22(2) of the MVRMA. The Board sent a letter to CZN outlining the timelines and requirements to recommence the licensing and permitting processes, including submission of a Consolidated Project Description (CPD).⁴ This information was requested under subsection 34(2) of the *Waters Act* and subsection 19(2) of the MVLUR. CZN submitted their CPD to support the Applications on February 15, 2012.⁵ Further information on the Post-EA Regulatory Process can be found in the Reasons for Decision dated July 30, 2013 for Licence MV2008L2-0002 and Permit MV2008D0014.⁶ On May 21, 2015, the Board decided on CZN's Amendment Request to Permit MV2008D0014 dated June 26, 2013⁷ and Schedule Change Request to Licence MV2008L2-0002 dated December 22, 2013⁸. Further information on the Amendment Request and Schedule Change Request can be found in the Reasons for Decision dated May 21, 2015.⁹

3.3 Details of the Regulatory Process

On May 13, 2020, CZN submitted Renewal Applications for Licence MV2020L2-0003 and Permit MV2020D0007.¹⁰ On May 21, 2020, the Applications were deemed complete and the review

¹ See Water Licence MV2020L2-00003 Application ([hyperlink](#)), submitted to the MVLWB on May 13, 2020.

² See Land Use Permit MV2020D0007 Application ([hyperlink](#)), submitted to the MVLWB on May 13, 2020.

³ See Review Board Public Registry (www.reviewboard.ca) – EA 0809-002 Report of Environmental Assessment and Reasons for Decision ([hyperlink](#)), dated December 8, 2011

⁴ See MVLWB Letter – Request for Consolidated Project Description ([hyperlink](#)), dated January 23, 2012.

⁵ See CZN – Consolidated Project Description ([hyperlink](#)), submitted to the MVLWB on February 15, 2012.

⁶ See Reasons for Decision for Licence MV2008L2-0002 and Permit MV2008D0014 ([hyperlink](#)), dated July 30, 2013.

⁷ See CZN – Amendment Request to Permit MV2008D0014 ([hyperlink](#)), dated June 26, 2013.

⁸ See CZN – Schedule Change Request to Licence MV2008L2-0002 ([hyperlink](#)), dated December 22, 2013.

⁹ See Reasons for Decision for Licence MV2008L2-0002 schedule change and Permit MV2008D0014 amendment ([hyperlink](#)), dated May 21, 2015.

¹⁰ See Water Licence MV2020L2-00003 Application ([hyperlink](#)) and Land Use Permit MV2020D0007 Application ([hyperlink](#)), submitted to the MVLWB on May 13, 2020.

commenced. Parties were requested to comment on whether the Applications should be deemed exempt from Part 5 of the MVRMA.

On June 26, 2020, Board staff distributed a Draft Work Plan in which Parties were requested to provide their comments and recommendations on the Draft Work Plan.¹¹ Comments on the Draft Work Plan were received by July 3, 2020 from: Government of Northwest Territories, Department of Lands (GNWT-Lands), Racher Consulting on behalf of Nahᓃą Dehé Dene Band (NDDB) and Łíídlı́ Kúę First Nation (LKFN), Acho Dene Koe First Nation (ADKFN), and CZN.¹² The Draft Work Plan included the scheduling of a public hearing as per paragraph 41(2)(a) of the *Waters Act*.

A public notice of the Applications was published in *News North* during the week of May 25, 2020 to fulfill paragraphs 41(1)(a) and 43(2)(a) of the *Waters Act*.¹³

By June 11, 2020, comments and recommendations regarding the Applications were received by the Board from the following Parties: ADKFN, Dehcho First Nation (DFN), GNWT-Lands, Racher Consulting on behalf of NDDB and LKFN, and Board staff. On June 18, 2020, CZN responded to the comments and recommendations.¹⁴

On June 30, 2020, the Board invoked paragraph 22(2)(b) of the MVLUR for the Application for Permit MV2020D0007.¹⁵

A public notice of the public hearing was published in *News North* during the week of August 17, 2020 to fulfill paragraphs 41(1)(a) and 43(2)(a) of the *Waters Act*.¹⁶

On July 13-14, 2020, Board staff hosted a technical workshop to discuss and seek clarity on issues raised by Parties and Board staff, and to provide an opportunity to discuss the Applications in advance of Parties submitting comments and recommendations to the Board. Workshop attendees included: CZN, Parks Canada, Shared Value Solutions Ltd. on behalf of ADKFN, Racher Consulting on behalf of LKFN and NDDB, GNWT, Department of Industry, Tourism, and Investment (GNWT-ITI), GNWT-Lands, and the Review Board. Summary notes from the workshop were circulated to the distribution list on July 23, 2020.¹⁷ No Information Requests (IRs) were generated from the Technical Workshop.

On July 14, 2020, Board staff distributed Version 2 of the Work Plan to reflect a timeline without due dates for Information Requests as none were generated from the Technical Workshop.¹⁸

By August 21, 2020, written submissions were received from LKFN, GNWT, Parks Canada, NDDB, and ADKFN.¹⁹

¹¹ See MVLWB Letter – Draft Work Plan ([hyperlink](#)), dated June 25, 2020.

¹² See Comments on Draft Work Plan ([hyperlink](#)), submitted by July 3, 2020.

¹³ See Notice of Application ([hyperlink](#)), dated May 25, 2020.

¹⁴ See Review Comment Summary Table – Application ([hyperlink](#)), dated June 18, 2020.

¹⁵ See MVLWB Letter – Invoke paragraph 22(2)(b) of MVLUR ([hyperlink](#)), dated June 30, 2020.

¹⁶ See Notice of Public Hearing ([hyperlink](#)), dated August 17, 2020.

¹⁷ See Technical workshop – Summary Notes ([hyperlink](#)), dated July 13-14, 2020.

¹⁸ See Work Plan Version 2 ([hyperlink](#)), dated July 14, 2020.

¹⁹ See Written Submissions: GNWT ([hyperlink](#)); LKFN ([hyperlink](#)); NDDB ([hyperlink](#)), ADKFN ([hyperlink](#)) and Parks Canada ([hyperlink](#)), submitted to the MVLWB on August 20-21, 2020.

As Parties had indicated in their written submissions that an in-person public hearing was not necessary and no interventions were received, the pre-hearing conference that was scheduled on August 25, 2020 was cancelled on August 21, 2020.²⁰

On September 1, 2020, an Information Request (IR) was sent to CZN to respond to GNWT's updated security estimate submitted with its written submission dated August 20, 2020.²¹ CZN's response was received on September 16, 2020.²² On September 17, 2020, the response regarding the security estimate was distributed for review. By October 1, 2020, comments were received from: GNWT, Department of Environment and Natural Resources (GNWT-ENR), and Board staff. CZN responded to comments regarding the security estimate on October 8, 2020.²³

All Parties indicated they did not wish to appear in-person before the Board, and CZN responded to written submissions on September 3, 2020 agreeing with all Parties that no public hearing was required.²⁴ The Board did not receive notification that any person intended to appear before the Board regarding the Applications ten days prior to the scheduled hearing date. On October 13, 2020, the public hearing was cancelled as per paragraph 41(3)(a) of the *Waters Act*,²⁵ and an updated Work Plan (Version 3) was distributed.²⁶ On October 19, 2020, a notice of public hearing cancellation was published in *News North*.²⁷

On October 13, 2020, Board staff circulated draft Licence and Permit conditions to Parties for review and comment. The following Parties responded by October 27, 2020: ADKFN, Environment and Climate Change Canada (ECCC), GNWT Environment and Natural Resources (ENR), GNWT-Lands, LKFN, Racher Consulting on behalf of NDDDB, and Board staff.²⁸ CZN responded to all the Parties' comments and provided comments of their own on November 3, 2020.²⁹

On November 18, 2020, Parties submitted written closing arguments to the Board³⁰ and CZN submitted closing arguments by November 25, 2020.³¹ Parties had an opportunity, in their closing arguments, to update their position based on issues raised during the regulatory process, and to summarize their final recommendations to the Board.

On December 17, 2020, the Board met to make decisions regarding the Applications.

²⁰ See Cancellation of Pre-hearing conference ([hyperlink](#)), dated August 21, 2020.

²¹ See Information Request Re Security ([hyperlink](#)), dated September 1, 2020.

²² See CZN – Responses to Information Request ([hyperlink](#)), submitted to the MVLWB on September 16, 2020.

²³ See Review Comment Summary Table – Responses to Information Request ([hyperlink](#)), dated October 8, 2020.

²⁴ See CZN – Response to Written Submissions ([hyperlink](#)); submitted to the MVLWB on September 3, 2020.

²⁵ See MVLWB Letter – Cancellation of Public Hearing ([hyperlink](#)), dated October 13, 2020.

²⁶ See MVLWB Updated Work Plan (Version 3) ([hyperlink](#)), dated October 13, 2020.

²⁷ See Notice of Cancellation of Public Hearing ([hyperlink](#)), dated October 19, 2020.

²⁸ See Review Comment Summary Table – Draft Permit and Licence ([hyperlink](#)), dated November 3, 2020.

²⁹ See Review Comment Summary Table – Draft Permit and Licence ([hyperlink](#)), dated November 3, 2020.

³⁰ See Closing Arguments: GNWT-ENR ([hyperlink](#)); LKFN ([hyperlink](#)); and NDDDB ([hyperlink](#)); submitted to the MVLWB on November 18, 2020.

³¹ See CZN – Closing Arguments ([hyperlink](#)), submitted to the MVLWB on November 20, 2020.

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* applies.

4.2 MVRMA Consultation and Engagement

In exercising its authority under the MVRMA, the Board must ensure that 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. 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.

The Board's requirements for engagement are set out in its *Engagement and Consultation Policy* (the Policy).³² The Policy was developed to ensure that the Board's obligations for achieving meaningful consultation (as set out by land claims and applicable legislation) with all affected Parties, including Aboriginal groups in the Mackenzie Valley, are met and consultation results clearly articulated.

Mining and milling at Prairie Creek Mine has been subject to EA, which extensively involved affected Aboriginal Parties.³³ Licence MV2020L2-0003 and Permit MV2020D0007 Applications were distributed to stakeholders, including: appropriate federal and territorial government departments and agencies; land owners; affected communities and Aboriginal organizations; Renewable Resource Boards; heritage regulators; and other interested Parties. For the Aboriginal organizations on the distribution list that the Board used, see Table 1 below:

³² See www.mvlwb.com → Resources → Policies and Guidelines: [MVLWB Engagement and Consultation Policy](#) (June 5, 2018).

³³ See Review Board's [Public Registry for EA0809-002](#).
MV2020L2-0003 and MV2020D0007 - Canadian Zinc. Corporation –
Prairie Creek Mine – Mining and Milling

Table 1. Aboriginal organizations on the Distribution List for Applications for Licence MV2020L2-0003 and Permit MV2020D0007

Acho Dene Koe First Nation	Kátł'odeeche First Nation
Dehcho Land Use Planning Committee	Liard First Nation (Yukon)
Deh Gáh Got'ie Dene Council	Łíídlı́ Kúę́ First Nation (Ft Simpson)
Dehcho First Nations	Nahą́ Dehé Dene Band
Dene Nation	North Slave Métis Alliance
Dene Tha' First Nation	Pehdzéh Kǰ First Nation (Wrigley)
Digaa Enterprises Ltd.	Ross River Dena Council
Fort Providence Metis Council #57	Sambaa K'e First Nation (Trout Lake)
Fort Providence Resource Management Board	Tłı́chų Government
Fort Simpson Metis Local 52	Tłı́chų Lands Protection Department
Hamlet of Fort Liard	Tłheths'ek'ehdeli First Nation (JMR)
Hamlet of Fort Providence	West Point First Nation
Ka'a'gee Tu First Nation	

4.2.1 Notifications and Initial Engagement

On May 13, 2020, CZN submitted an Engagement Plan³⁴ and an Engagement Log and Record³⁵ for these Applications which detail CZN's engagement with NDDDB, LKFN, ADKFN, Jean Marie River First Nation, Sambaa K'e Dene Band, Pehdzéh Kǰ First Nation, Fort Simpson Métis Nation, and DFN from July 3, 2019 to April 7, 2020. The Engagement Plan indicated that CZN has Impact Benefit Agreements with NDDDB and LKFN, and that the company has been in discussion with ADKFN regarding future commitments. The Engagement Plan outlined how CZN intends to continue engagement with NDDDB, LKFN, and ADKFN during the pre-mining operations period. Further, the Engagement Plan provided details for a technical advisory committee that will meet during the operations period of the mine and is to be composed of nominees from NDDDB and LKFN. CZN intended for the technical advisory committee meetings to also be open to other interested Band members and members of the public. Finally, the Engagement Plan outlined CZN's intentions to hold Socio-Economic Advisory Committee meetings for the Mine.

4.2.2 Aboriginal Parties and Their Concerns

During this proceeding, ADKFN raised concerns about potential impacts of CZN's activities on ADKFN's Aboriginal and Treaty rights. ADKFN believed that CZN should not only consider impacts to their territory associated with the transportation route because of potential impacts to wildlife and wildlife habitat, Water quality and human health can be felt outside the Project footprint in ADKFN territory.

Upon reviewing the evidence, the Board believes that CZN's engagement efforts with ADKFN for these Applications satisfactorily aligns with the Board's *Engagement and Consultation Policy and Engagement Guidelines for Applicants and Holders of Water Licences and Land Use Permits*.³⁶ Further, the Board has directed CZN to update the Engagement Plan to indicate how affected Parties will be engaged with should CZN decide to use Licence MV2020L2-0003 and Permit MV2020D0007 for mining and milling. Further rationale for the Board's decision and discussion

³⁴ See Engagement Plan, ([hyperlink](#)), submitted to the MVLWB on May 13, 2020.

³⁵ See Engagement Log and Record, ([hyperlink](#)), submitted to the MVLWB on May 13, 2020.

³⁶ See www.mvlwb.com → Resources → Policies and Guidelines: [MVLWB Engagement Guidelines for Applicants and Holders of Water Licences and Land Use Permits](#) (June 5, 2018).

about the comments and recommendations received by the Board on CZN's Engagement Plan and Engagement Log and Record can be found in Section 5.3 of these Reasons for Decision.

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) and section 102 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 Water Use Fees

CZN is required to pay Water Use Fees as per section 8 of the Waters Regulations under Licence MV2020L2-0003.³⁷ CZN paid Water Use Fees of \$146.00 with the Application.³⁸ Water Use Fees in the amount of \$146.00 must be paid hereafter for the duration of the Licence on or before its annual Anniversary Date. As per the Board's *Water Use Fee Policy*, fees are based on the volume of Water that is authorized by the Licence, not the amount that is actually used. If CZN does not use Water because the site is in care and maintenance, CZN is still required to pay Water Use Fees annually.

4.3.4 Existing Licences

With respect to paragraph 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.

4.3.5 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 either during the prescribed period or afterwards. 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.

³⁷ See www.mvlwb.com → Resources → Policies and Guidelines: [MVLWB Water Use Fee Policy](#), dated March 2013.

³⁸ See Water Licence MV2020L2-00003 Water Use Fee Receipt ([hyperlink](#)), dated May 21, 2020.

4.3.6 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*.³⁹ These are discussed further in Section 5.7 of these Reasons for Decision (Part F of the Licence: Conditions Applying to Water and Wastewater Management).

4.3.7 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. These are further discussed in Section 5.7 of these Reasons for Decision (Part F of the Licence: Conditions Applying to Water and Wastewater Management).

4.3.8 Financial Responsibility

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

CZN's Applications mentioned that its financial capacity information is on file for Licence MV2008L2-0002.⁴⁰ During the review of the Applications, Board staff requested CZN to provide an update on how CZN will satisfy the financial responsibility.⁴¹ In response, CZN submitted a document quoting the Board's Reasons for Decision dated June 14, 2013, and indicating the same reasons apply for this Licence. In addition, CZN provided the following information:

As a further note on financial capacity, CZN's parent company, NorZinc, has a major shareholder called Resource Capital Funds (RCF). RCF manages assets of over C\$5 billion and through one of its funds (RCF VI CAD LLC) it owns approximately 40% of the shares of NorZinc. RCF is a major resource investment company, and the financing of the ASR [All Season Road], and the Prairie Creek Mine development, is well within the capacity of RCF, should it choose to do so. Since 2018 RCF has invested over C\$30 million in NorZinc and Prairie Creek with C\$20 million in 2018, C\$8 million in 2019 and agreed a further \$4 million (US\$3 million) so far in 2020. At the same time as RCF invested an additional \$20 million in CZN in July 2018, Mr. Don MacDonald became NorZinc and CZN CEO. Mr. MacDonald's focus over much of his career has been on financing the development of mines. Over the past 30 years he has been involved in the raising of over \$5 billion of development financing for mining projects in Canada, the US and Chile.

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 26(5)(c) of the *Waters Act*.

³⁹ See www.mvlwb.com → Resources → Policies and Guidelines: [MVLWB Water and Effluent Quality Management Policy](#) (March 31, 2011).

⁴⁰ See Water Licence MV2020L2-00003 Application ([hyperlink](#)), submitted to the MVLWB on May 13, 2020.

⁴¹ See Review Comment Summary Table – Application – MVLWB-ID-3 ([hyperlink](#)), dated June 18, 2020.

4.3.9 *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.

4.3.10 *Time Limit*

The Board is satisfied it has adhered to subsection 47(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**

The Board has consulted with ‘Responsible Ministers’ as defined under subsection 111(1) of the MVRMA and has considered their recommendations for the term, scope, defined terms, and conditions of this Licence.

4.4.1 *Environmental Assessment*

The Project has been the subject of an EA conducted by the Review Board: EA0809-002.⁴² Section 62 and subsection 130(5) of the MVRMA require that measures within the jurisdiction of the Board must be reflected in conditions set out in any water licence issued by the Board.

The Applicant has not proposed any changes in the Applications. The Reasons for Decision for Licence MV2008L2-0002 and Permit MV2008D0014 details how the Board incorporated the suggestions from the EA into Licence conditions. Based on this analysis, the Board is satisfied that the Licence has met the requirements of section 62 of the MVRMA.⁴³

4.4.2 *Preliminary Screening*

On June 25, 2020, the Board met and confirmed the activities associated with the Applications were exempt from preliminary screening based on Part 1, Schedule 1, section 2.1 of the Exemption List Regulations to the MVRMA.⁴⁴ Consequently, no preliminary screening was conducted.

5.0 **Decision – Water Licence MV2020L2-0003**

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

- 1) The Report of Environmental Assessment EA0809-002 and the suggestions therein, as approved by the Responsible Minister;
- 2) The Reasons for Decision for Licence MV2008L2-0002;
- 3) The comments and recommendations made during this proceeding;
- 4) The evidence and submissions from CZN received by the Board;
- 5) The written comments and submissions from Parties received by the Board; and
- 6) The Staff Report prepared for the Board.

⁴² See MVEIRB Registry - Environmental Assessment EA 0809-002 ([hyperlink](#)).

⁴³ See Reasons for Decision for Licence MV2008L2-0002 and Permit MV2008D0014 ([hyperlink](#)), dated July 30, 2013.

⁴⁴ See MVLWB Decision – Preliminary Screening Exemption Confirmation ([hyperlink](#)), dated June 30, 2020.

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 MV2020L2-0003 should be issued, subject to the scope, defined terms, conditions, and term contained therein. The Board's determinations and reasons for this decision are set out below.

The scope, defined terms, 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.

Given that CZN requested that the only change for the Water Licence MV2020L2-0003 renewal be to the term of the Licence, the Board decided that the Licence conditions would remain predominantly unchanged compared to the previous Licence MV2008L2-0002. Further information on the unchanged conditions from Licence MV2008L2-0002 and Permit MV2008D0014 can be found in the Reasons for Decision dated July 30, 2013.⁴⁵ Additional information on the Board's decision on Permit MV2008D0014 amendment and Licence MV2008L2-0002 schedule change can be found in the Reasons for Decision dated May 21, 2015.⁴⁶

However, the Board has, where appropriate, made administrative updates and clarifications to the conditions to be consistent with other recently issued Type A water licences and the *MVLWB Standard Water Licence Conditions and Schedules* (Standard Licence Conditions).⁴⁷ Site-specific conditions have been developed where necessary. As the major change to the renewed Licence MV2020L2-0003 is the term of the Licence, the Board has not updated all Licence conditions in accordance with the Board's Standard Licence Conditions, with some exceptions of legislative references and Board policies and guidelines, where appropriate. CZN has explicitly stated that a water licence application for an updated mine plan is forthcoming.⁴⁸ Therefore, the Board will update the conditions to be in accordance with the Board's Standard Licence Conditions, and considering the updated Project Description, during the future proceeding.

During the Renewal proceeding, CZN claimed that the Board agreed to put the previous mining and milling Licence MV2008L2-0002 under "abeyance" as requested by CZN on October 10, 2014 after issuance.⁴⁹ CZN was of the opinion that the previous Licence MV2008L2-0002 was not activated, and that the Licence being considered activated was an issue for CZN because the company was not ready to proceed with activities.⁵⁰ As stated in the Board's Reasons for Decisions dated May 21, 2015, the Board hereby reiterates and clarifies that the Board was able to accommodate CZN's abeyance request through changing compliance dates in the Licence for certain Plans.⁵¹ However, the Board did not outright approve the abeyance request as this term is not used in the MVRMA or *Waters Act*.

⁴⁵ See Reasons for Decision for Licence MV2008L2-0002 and Permit MV2008D0014 ([hyperlink](#)), dated July 30, 2013.

⁴⁶ See Reasons for Decision for Licence MV2008L2-0002 schedule change and Permit MV2008D0014 amendment ([hyperlink](#)), dated May 21, 2015.

⁴⁷ See www.mvlwb.com → Resources → Policies and Guidelines: [MVLWB Standard Water Licence Conditions and Schedules](#), dated April 20, 2020.

⁴⁸ See Water Licence MV2020L2-00003 Application ([hyperlink](#)), submitted to the MVLWB on May 13, 2020.

⁴⁹ See CZN's Abeyance Request ([hyperlink](#)), dated October 10, 2014.

⁵⁰ See Review Comment Summary Table – Renewal Applications – MVLWB ID-45, ([hyperlink](#)), dated June 18, 2020.

⁵¹ See CZN Water Licence MV2008L2-0002 Reasons for Decision ([hyperlink](#)), dated May 21, 2015.

CZN has obtained separate authorizations for its mining and milling and mineral exploration activities at the Prairie Creek Mine.⁵² The Board issued these authorizations at the time in accordance with CZN's proposed Project schedule. In other words, the Board did not issue the mining and milling authorizations under the impression that CZN was not ready to proceed with production. Therefore, the defined terms and conditions of the mining and milling authorizations did not reflect CZN's actual Project schedule. Because CZN has not been able to move forward with production, the multiple authorizations and their overlapping scopes for the same mine site has caused confusion on regulatory requirements. The Board has a strong preference for CZN's future Applications based on an updated mine plan to include all activities at Prairie Creek Mine, including those currently separately authorized under the mining and milling and mineral exploration authorizations. This is especially important if CZN is uncertain of its future Project schedule. The reporting requirements of the multiple authorizations can be aligned to reduce administrative burden and overlapping scopes can be prevented if the authorizations were amalgamated.

CZN has not been consistently submitting reports such as Surveillance Network Program (SNP) Reports or Annual Reports as required under their existing authorizations. Once an authorization is issued, CZN is required to follow the requirements of the Licence, even during periods of care and maintenance. CZN is not exempt from the requirements of the Permit and Licence because CZN is not ready to proceed with production. This is especially important for existing mine infrastructure that is not currently regulated under the mineral exploration Licence MV2019L2-0006 and Permit MV2020C0008.

The Board understands CZN is not ready to proceed with activities, and that CZN is intending to maintain valid authorizations for Project attractiveness.⁵³ To accommodate the situation that certain components of Prairie Creek Mine are under care and maintenance while exploration activities are on-going, the Board has set submission timelines to avoid submissions of request to change compliance dates or extension requests. In the Reasons for Decision below, the Board has clarified its expectations of submission requirements during the care and maintenance of Prairie Creek Mine. When CZN submits the new longer-term Applications with its updated mine plan, the Board expects CZN to provide a realistic Project schedule, so the Board can adjust the submission timelines accordingly.

The Board received recommendations from NDDB⁵⁴, LKFN⁵⁵, and CZN⁵⁶ that the timeline for submission and approval of management plans under Licence MV2020L2-0003 and Permit MV2020D0007 be connected to physical construction activities wherever possible. Although many submission timelines are set prior to commencement of certain Project activities, the Board notes that some of the submissions are normally required at the Application phase for completeness. Therefore, the Board has clarified its expectations for the new longer-term Applications with CZN's updated mine plan, which is in accordance with the *MVLWB Guide to the Water Licensing Process*.⁵⁷

⁵² See MVLWB Registry (www.mvlwb.com). Land Use Permit MV2008D0014 ([hyperlink](#)), Water Licence MV2008L2-0002 ([hyperlink](#)), Permit MV2020C0008 ([hyperlink](#)), Licence MV2019L2-0006 ([hyperlink](#)).

⁵³ See Water Licence MV2020L2-00003 Application ([hyperlink](#)), submitted to the MVLWB on May 13, 2020.

⁵⁴ See Closing Arguments: NDDB ([hyperlink](#)); submitted to the MVLWB on November 18, 2020.

⁵⁵ See Closing Arguments: LKFN ([hyperlink](#)); submitted to the MVLWB on November 18, 2020.

⁵⁶ See Closing Arguments: CZN ([hyperlink](#)); submitted to the MVLWB on November 20, 2020.

⁵⁷ See www.mvlwb.com → Resources → Policies and Guidelines: *MVLWB Guide to the Water Licensing Process*, dated September 16, 2020.

5.1 Term of Licence

CZN has applied for a term of three years for the Licence. CZN has requested a short-term renewal to allow time for conducting analysis on Project enhancement and preparing for new and longer-term applications to reflect Project changes based on the analysis.

Subsection 26(2) of the *Waters Act* allows for a Licence term of not more than 25 years or the duration of the undertaking. During the initial review of the Applications, Parties including GNWT and Racher Consulting supported the renewal of the Licence for a three-year term to allow CZN to develop an updated mine plan which will be submitted as part of a future application for an extended term.⁵⁸ In GNWT's written submission to the Board, GNWT asked the Board to consider a longer term to ensure sufficient time is allotted for CZN to acquire their proposed longer term Licence.⁵⁹ LKFN and NDDDB indicated in their written submission that they support the term of three years for the Licence.⁶⁰ In ADKFN's written submission, ADKFN recommended the shortened term proposed by CZN could be considered.⁶¹

During the review of the draft conditions, Board staff sought clarification on the proposed term that CZN is seeking. In response, CZN indicated that it is not opposed to a longer term but believe the proposed three-year term should be sufficient.⁶²

After reviewing the submissions made during this regulatory process, including taking into consideration the closely linked Permit MV2020D0007 that the Board has decided will have a term of 5 years, the Board has determined that an appropriate term for Licence MV2020L2-0003 is 5 years. This decision is in accordance with GNWT's recommendation that the Board consider a longer term to Licence MV2020L2-0003 to ensure sufficient time is allocated for CZN to acquire their proposed longer term Licence.

5.2 Part A: Scope and Definitions

Part A of the Licence contains the scope and defined 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.

In ADKFN's written submission to the Board, it stated that:

Although Can Zinc and MVLWB state that no work will occur under these authorizations, the permit and license technically authorize work. ADKFN does not support any work occurring under the permit and license as-is based on impacts to ADKFN's Treaty and Aboriginal rights and interests.⁶³

⁵⁸ See Review Comment Summary Table – Application – GNWT ID-9, Racher ID-2 ([hyperlink](#)), dated June 18, 2020.

⁵⁹ See Written Submissions: GNWT ([hyperlink](#)); submitted to the MVLWB on August 20-21, 2020.

⁶⁰ See Written Submissions: LKFN ([hyperlink](#)); NDDDB ([hyperlink](#)), submitted to the MVLWB on August 20-21, 2020.

⁶¹ See Written Submissions: ADKFN ([hyperlink](#)); submitted to the MVLWB on August 20-21, 2020.

⁶² See Review Comment Summary Table – Draft Conditions – MVLWB-ID-1, ([hyperlink](#)), dated November 3, 2020.

⁶³ See Written Submissions: ADKFN ([hyperlink](#)); submitted to the MVLWB on August 20-21, 2020.

The Board would like to clarify the Board did not state that no work will occur under these authorizations as indicated in ADKFN's written submission. During the Technical Workshop, Board staff and Parties discussed whether Effluent Quality Criteria (EQC) would be revised based on current literature and be distributed for public review. Board staff confirmed there will be opportunity to comment through the application process and through management plans should CZN decide to use the renewal authorizations for mine operations, if granted.⁶⁴

During the review of the draft conditions, ADKFN recommended the scope of the Licence be revised to reflect that CZN's intention is to conduct care and maintenance on site and apply for a longer term Licence to reflect CZN's updated mine plan. ADKFN also requested that if the scope is not revised, then its technical comments submitted during the review of the Applications dated June 18, 2020 and discussed at the Technical Workshop should be addressed prior to issuance.⁶⁵

The Board understands ADKFN's concerns with CZN commencing operation of the mine under the renewed Licence MV2020L2-0003. The scope of a Licence is intended to state the activities that a Licensee is entitled to conduct and the activities that trigger the Licence. The scope of the Licence MV2020L2-0003 has been previously screened by the Board, and CZN has not proposed any changes to the scope in its renewal Application. Therefore, the Board is of the opinion that it is not appropriate to prohibit CZN from commencing activities that the company was previously entitled to conduct. Moreover, CZN has explicitly expressed its intentions to apply for a longer-term Licence which reflects its updated mine plan. If CZN does intend to conduct activities under the current Licence MV2020L2-0003, the Licence requires CZN to submit design reports and plans for public review and Board approval before commencement of activities. Therefore, ADKFN would have an opportunity to provide technical comments before commencement of any activities.

The Board has decided the scope of the Licence to remain unchanged from the previous Licence MV2008L2-0002, except for some administrative changes.

As stated in Section 5.0 of these Reasons for Decision, the Board notes the overlapping scope between the mining and milling and the mineral exploration authorizations. If CZN continues to be uncertain with the Project schedule when applying for the longer-term mining and milling authorizations, the Board recommends CZN to amalgamate the mining and milling and mineral exploration authorizations to prevent overlapping scopes and requirements.

Defined Terms

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.

Comments were not received on definitions in the Licence. The definitions in the Licence have remained unchanged from the previous Licence MV2008L2-0002, except for some administrative updates.

⁶⁴ See Technical workshop – Summary Notes ([hyperlink](#)), dated July 13-14, 2020.

⁶⁵ See Review Comment Summary Table – Draft Conditions – ADKFN-ID-1, ([hyperlink](#)), dated November 3, 2020. MV2020L2-0003 and MV2020D0007 - Canadian Zinc Corporation – Prairie Creek Mine – Mining and Milling

5.3 Part B: General Conditions and Schedule 1

Part B and Schedule 1 of the Licence contain general administrative conditions regarding compliance and conformity with the *Waters Act*. The Board has carried over conditions in Part B of the previous Licence MV2008L2-0002 to Part B of MV2020L2-0003. The following outlines the changes made to Part B and Schedule 1 of the Licence.

Part B, Condition 2: Water Use Fees

The Board has not changed the requirements for submitting Water Use Fees. Although CZN is in care and maintenance, Water Use Fees are required for the authorized amount not the used volume. In other words, CZN is required to pay Water Use Fees annually in accordance with the Board's *Water Use Fee Policy*.⁶⁶ The Board has provided the calculated Water Use Fees in the Issuance Letter.

Part B, Condition 14 and Schedule 1, Condition 1: Annual Water Licence Report

The requirements for the Annual Water Licence Report are outlined in Part B, condition 14, and Schedule 1, condition 1.

During the review of the draft conditions, comments were received on the Care and Maintenance Plan draft condition of the Licence MV2020L2-0003 Part I, Condition 1 and Schedule 8, Condition 1.⁶⁷ ADKFN supported the requirement of the Care and Maintenance Plan for the established infrastructure on site.⁶⁸ In response, CZN clarified that care and maintenance already occurs in relation to the surface lease and exploration authorizations. During the review of the draft conditions, Board staff asked CZN to comment on the requirements of the Care and Maintenance Plan in the draft Licence MV2020L2-0003 Part I, Condition 1 and Schedule 8, Condition 1.⁶⁹ In response, CZN indicated that they are not in agreement with the requirement. CZN indicated that the Care and Maintenance Plan is unnecessary and that the exploration Licence MV2019L2-0006's scope includes other facilities on site such as the Tank Farm and flood protection works. CZN further argued that the exploration Licence MV2019L2-0006 also covers the SNP for all site and runoff locations. CZN explained that the current care and maintenance situation is due to insolvency of the previous lease holder, therefore, the temporary closure definition does not apply as the Prairie Creek Mine never began operations.⁷⁰ Both LKFN and Racher Consulting, on behalf of NDDB, were of the opinion that the maintenance and monitoring of the mine site is regulated under the exploration Licence MV2019L2-0006, and were unsure what additional information the Care and Maintenance Plan would provide. Therefore, LKFN and Racher Consulting recommended removal of the requirement for a Care and Maintenance Plan to reduce time and effort from Parties.⁷¹ In response, CZN agreed.

The Board considered all the evidence on the record for the requirement of a Care and Maintenance Plan. Regarding the scope of the exploration Licence MV2019L2-0006, the Board agrees with CZN that the scope includes part of the existing mine infrastructure such as the Tank Farm (Licence MV2019L2-0006, Part E, Conditions 12, 18, and 19) and flood protection work (Licence MV2019L2-

⁶⁶ See www.mvlwb.com → Resources → Policies and Guidelines: [MVLWB Water Use Fee Policy](#), dated March 2013.

⁶⁷ See CZN Water Licence MV2020L2-0003 - Draft Conditions ([hyperlink](#)), dated October 21, 2020.

⁶⁸ See Review Comment Summary Table – Draft Conditions – ADKFN ID-7, ([hyperlink](#)), dated November 3, 2020.

⁶⁹ See Review Comment Summary Table – Draft Conditions – MVLWB ID-6, ([hyperlink](#)), dated November 3, 2020.

⁷⁰ See Review Comment Summary Table – Draft Conditions – MVLWB ID-6, ([hyperlink](#)), dated November 3, 2020.

⁷¹ See Review Comment Summary Table – Draft Conditions – LKFN ID-4, Racher ID-5 ([hyperlink](#)), dated November 3, 2020.

0006, Part E, Condition 13).⁷² However, the Board is of the opinion that not all existing mine infrastructure are regulated under the scope of Licence MV2019L2-0006.

The Board has identified items that CZN is required to report on during care and maintenance of Prairie Creek Mine. For example, the existing mine site and infrastructure that was constructed in the early 1980's includes: a mill concentrator complex; administration building; accommodation complex; maintenance workshops; fuel storage tank facilities; 12 hectare Water Storage Pond; Water Treatment Facilities; Sewage Treatment Plant; Waste Rock dumps; a reagent storage pad; explosives magazine; an airstrip; and ancillary site facilities.⁷³ Although CZN has identified that the Fuel Tank and flood protection work are regulated under the exploration Licence MV2019L2-0006, it is unclear if the remaining existing mine infrastructure is being managed adequately during care and maintenance. For example, improper management of the existing explosives magazine on site can cause adverse environmental impacts.

CZN argued that "Temporary Closure", defined as "a state of care and maintenance, with the intent of resuming Project activities", does not apply to CZN as the Prairie Creek Mine never commenced and therefore cannot resume. The Board understands that CZN did not conduct any demolition, refurbishment, development, or operations of the existing site facilities as was intended under the previous Licence MV2008L2-0002 because CZN was not ready to proceed with production. As a result, the Board is unclear how CZN has been managing these existing site facilities since issuance of MV2008L2-0002. CZN has a history of applying for Permits and Licence in order to maintain valid authorizations and Project attractiveness as described in CZN's Applications cover letter.⁷⁴ As CZN continues to make Project enhancements, it is unknown when CZN will commence activities authorized under those authorizations. It is the Board's opinion that management of existing mine infrastructure that CZN inherited from the previous owner should be reported while the Prairie Creek Mine is under care and maintenance.

CZN indicated that the mine site is under care and maintenance under the surface lease.⁷⁵ The Board notes that the surface lease is administrated by GNWT, and the Board does not have access to GNWT administrated leases. Therefore, the Board does not receive reporting from the care and maintenance of the Prairie Creek Mine.

After considering all evidence on the record, the Board has decided not to require the Care and Maintenance Plan. Instead, the Board is requiring CZN to report its care and maintenance activities under the Water Licence Annual Report under Licence MV2020L2-0003 Part B, Condition 14 and Schedule 1, Condition 1. The Board understands some existing mine infrastructures such as the Tank Farm and flood protection work are regulated and managed under Exploration Licence MV2019L2-0006. For any overlap between the reporting requirements of Mining and Milling Licence MV2020L2-0003 and Mineral Exploration Licence MV2019L2-0006, CZN can refer to the Annual Report submitted under MV2019L2-0006 for the existing structures that have overlap. CZN shall clearly identify how the items in Licence MV2020L2-0003, Schedule 1, Condition 1 are managed or identify which authorizations regulate the existing structures in instances of overlap.

⁷² See CZN's Exploration Water Licence MV2019L2-0006 ([hyperlink](#)), issued September 2, 2020.

⁷³ See Report of Environmental Assessment and Reasons for Decision for EA0809-002 ([hyperlink](#)), dated December 8, 2011.

⁷⁴ See Water Licence MV2020L2-00003 Application ([hyperlink](#)), submitted to the MVLWB on May 13, 2020.

⁷⁵ See Review Comment Summary Table – Draft Conditions – ADKFN ID-7 ([hyperlink](#)), dated November 3, 2020.

The Board notes that CZN has not been consistently submitting Annual Reports under the previous Licence MV2008L2-0002. On March 31, 2020, CZN submitted a letter indicating no activities have occurred under the mining and milling authorization.⁷⁶ As stated in section 5 of these Reasons for Decision, the Board notes that CZN is required to submit Annual Reports even if the mine and in care and maintenance and CZN is not ready to proceed with production. The Board understands the contents of the Licence was set with the understanding that CZN would proceed with production, and not for the care and maintenance of the site. As CZN is not ready to proceed with production, the Board recognizes that some reporting requirements are not necessary. As a result, the Board has identified and clarified requirements in the Licence that CZN should report on during the care and maintenance of Prairie Creek Mine.

Part E, Condition 6 and Schedule 4, Condition 3 require CZN to conduct metal loading investigations of the existing Waste Rock Pile below 970 and 930 portals. CZN indicated that the investigations were conducted, but not submitted.⁷⁷ The previous Licence MV2008L2-0002 requires CZN to report annually on the geochemical investigation of the existing Waste Rock Pile. Schedule 4, Condition 3(a) also requires CZN to sample any Seepage as per SNP-04. CZN has not reported whether Seepage has been observed around the existing Waste Rock Pile or provided any SNP reports. CZN must report those results annually to ensure the existing Waste Rock Pile is properly managed and not releasing metals into the Receiving Environment. The Board expects CZN to provide the geochemical data from previous years and continue to report in future years during care and maintenance of the site. CZN may request to change the SNP requirement once CZN has collected sufficient data and provided supported rationale that the existing Waste Rock Pile is not contributing to metal loading into the Receiving Environment.

The Board identified various SNP stations that CZN shall continue to monitor during the care and maintenance of Prairie Creel Mine. These SNP Stations include SNP 04, 14a, 16, 17 and 24. Further explanation can be found in Section 5.12 of these Reasons for Decision. This includes the requirement for reporting quantities of treated Sewage Effluent from the Sewage Treatment Plant (SNP 01 and 02), if necessary.

Part B, Condition 1: 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*⁷⁸, and the Board's *Engagement and Consultation Policy*.⁷⁹ CZN included an Engagement Plan⁸⁰ and an Engagement Log and Record⁸¹ in the Applications on May 13, 2020. The Board notes that pre-engagement for the Applications was determined to be in accordance with the Board's Guidelines and Policy.

ADKFN brought up concerns about engagement during the regulatory process. During the review of the Applications, ADKFN indicated that they do not believe they have been meaningfully engaged with

⁷⁶ See Letter Re Water Licence Annual Report ([hyperlink](#)), dated March 31, 2020.

⁷⁷ See Water Licence MV2020L2-00003 Status of Management Plan and Studies ([hyperlink](#)), submitted to the MVLWB on May 19, 2020.

⁷⁸ See www.mvlwb.com → Resources → Policies and Guidelines: [MVLWB Engagement Guidelines for Applicants and Holders of Water Licences and Land Use Permits](#) (June 5, 2018).

⁷⁹ See www.mvlwb.com → Resources → Policies and Guidelines: [MVLWB Engagement and Consultation Policy](#) (June 5, 2018).

⁸⁰ See Engagement Plan, ([hyperlink](#)), submitted to the MVLWB on May 13, 2020.

⁸¹ See Engagement Log and Record, ([hyperlink](#)), submitted to the MVLWB on May 13, 2020.

on the Applications.⁸² ADKFN acknowledged that CZN had notified ADKFN of their intent to submit the Applications over the past year, and kept ADKFN informed about their progress. However, ADKFN noted that they have consistently raised concerns regarding support to review and consider potential impacts of CZN's activities on ADKFN's Aboriginal and Treaty rights, and indicated that there has been a delay at arriving at a collaborative resolution.⁸³ CZN responded that they have conducted engagement related to benefits negotiations with ADKFN, but did not include details in the Engagement Log and Record, as they consider this information to be confidential.

The Board notes that CZN's Engagement Plan and Log includes evidence of CZN's engagement with ADKFN including openness to discuss ADKFN's future Project participation. Further, it is not within the Board's jurisdiction to require agreements related to funding to be in place, and the Board's Engagement Guidelines do not require proponents to report extensively on engagement efforts related to socio-economic issues.

In their written intervention, ADKFN reiterated their concern with CZN's engagement efforts to date, and how CZN has characterized impacts of their ongoing and proposed activities on ADKFN's Treaty and Aboriginal rights and interests.⁸⁴ ADKFN specifically indicated that CZN had previously mentioned that impacts to ADKFN should be scoped to impacts associated with the transportation route, and ADKFN disagreed with this as they feel potential impacts to wildlife and wildlife habitat, Water quality and human health can be felt outside the Project footprint in ADKFN territory. In a comment on the draft conditions, ADKFN recommended that "the MVLWB require CZ to collaborate with affected First Nations, like ADKFN, and secure affected First Nations approval of the Engagement Plan prior to submission to the MVLWB and commencing activities authorized by the permit and license".⁸⁵ CZN responded that they have provided timely information to the ADKFN Chief regarding permitting matters and have had regular meetings with ADKFN to discuss business matters.

During the review of the draft conditions, LKFN commented that there is a contact name in the Engagement Plan that may be updated, and that LKFN is still engaged in negotiations with CZN. However, LKFN but did not provide any recommendations to the Board regarding engagement.⁸⁶

NDDB also commented about engagement during the review of the draft conditions. NDDB quoted concerns that had been raised by ADKFN regarding ADKFN's Treaty and Aboriginal rights and interests, and specifically ADKFN's perspective that there would be "potential direct and indirect impacts to ADKFN's rights and interests because of this project, in addition to the transportation route".⁸⁷ NDDB stated that:

NDDB recommends that the Board approve Can Zinc's submitted Engagement Plan concurrent with the issuance of the license and permit, rather than providing six months for preparation and subsequent Board review of a revised plan. The Board has stated that its "Engagement Guidelines are based on the premise that the appropriate level of Engagement should reflect the scale, location, and nature of a proposed activity." In considering the appropriate level of engagement required between Can Zinc and ADKFN, NDDB makes the following observations regarding the location of Can Zinc's activities

⁸² See Review Comment Summary Table – Renewal Applications – ADKFN ID-12, ([hyperlink](#)), dated June 18, 2020.

⁸³ See Review Comment Summary Table – Renewal Applications – ADKFN-ID-13, ([hyperlink](#)), dated June 18, 2020.

⁸⁴ See Written Submissions: ADKFN ([hyperlink](#)), submitted to the MVLWB on August 20-21, 2020.

⁸⁵ See Review Comment Summary Table – Draft Conditions – ADKFN-ID-2, ([hyperlink](#)), dated November 3, 2020.

⁸⁶ See Review Comment Summary Table – Draft Conditions – LKFN-ID-2, ([hyperlink](#)), dated November 3, 2020.

⁸⁷ See Review Comment Summary Table – Draft Conditions – NDDB-ID-3, ([hyperlink](#)), dated November 3, 2020.

proposed under Land Use Permit MV2020D0007 and Water Licence MV2020L2-0003. The proposed Mine is located well outside ADKFN's Asserted Territory. ADKFN's Asserted Territory is upstream of any watercourse that might be affected by discharges from the proposed Mine. The proposed All-Season Road to the Mine, approved under Land Use Permit MV2014F0013 and its associated licences, is located entirely within NDDB's traditional territory. The short (approximately 5 km) stretch of the proposed All-Season Road located within ADKFN's Asserted Territory, located southeast of the Liard River crossing, is less than 10 km from the centre of the community of Nahanni Butte. Agreements between NDDB, ADKFN, and Saamba K'e First Nation have acknowledged NDDB's primary interests in the immediate vicinity of Nahanni Butte, including the area along and North of the Nahanni Butte Access Road.⁸⁸

The Board notes that NDDB referred to an August 28, 2020 Board decision⁸⁹ where the Board agreed with CZN that Applications related to underground and surface mineral exploration at Prairie Creek Mine were not related to CZN's proposed All Season Road (ASR) that is authorized under different Water Licences and a different Land Use Permit.⁹⁰ In the August 28, 2020 Board decision the Board indicated that ADKFN's request that CZN's Engagement Plan acknowledge potential impacts to ADKFN's rights and interests beyond the transportation route may be valid when considering the ASR, but that the request was outside the scope of the mineral exploration Applications.

In their Closing Arguments, NDDB reiterated their position that CZN's Engagement Plan and Engagement Log and Record submitted on May 13, 2020 with their Applications should be approved at issuance for Licence MV2020L2-0003 and Permit MV2020D0007.⁹¹

The Board acknowledges ADKFN's concerns with CZN's engagement. Consistent with the previous Board decision made on August 28, 2020, the Board believes potential impacts to ADKFN's rights and interests beyond the transportation route may be valid when considering the Prairie Creek ASR Project, but are outside the scope of the mining and milling Applications. As CZN's Engagement Plan and Engagement Log and Record are in accordance with the Board's *Engagement Guidelines for Applicants and Holders of Water Licences and Land Use Permits*, the Board has decided to approve the Engagement Plan on an interim basis.

If CZN does decide to commence mining and milling activities under Licence MV2020L2-0003 and Permit MV2020D0007, as opposed to waiting for approval of future authorizations based on an updated mine plan, CZN must engage with affected Parties. For this reason, the Board directs CZN to revise and re-submit the Engagement Plan **six months prior to commencement of activities** to detail future engagement plans related to use of Licence MV2020L2-0003 and Permit MV2020D0007 for mining and milling operations at Prairie Creek Mine. The Board believes this will help to address ADKFN's concerns with CZN commencing activities under Licence MV2020L2-0003 and Permit MV2020D0007.⁹²

⁸⁸ See Review Comment Summary Table – Draft Conditions – NDDB-ID-3, ([hyperlink](#)), dated November 3, 2020.

⁸⁹ See MVLWB Decision – MV2019L2-0006 Type B Water Licence Amendment ([hyperlink](#)), dated September 2, 2020

⁹⁰ See www.mvlwb.com Public Registry for Water Licence [MV2014L8-0006](#), Water Licence [MV2019L8-0002](#) and Land Use Permit [MV2014F0013](#) for Canadian Zinc Corporation's All Season Road.

⁹¹ See Closing Arguments: NDDB ([hyperlink](#)), submitted to the MVLWB on November 18, 2020.

⁹² See Review Comment Summary Table – Draft Conditions – ADKFN-ID-1, ([hyperlink](#)), dated November 3, 2020.

The Board expects CZN to work with stakeholders when updating the Engagement Plan, to ensure their concerns and recommendations are addressed.

5.4 Part C: Conditions Applying to Security Requirements and Schedule 2

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.

As revised RECLAIM estimates were submitted during the proceeding, Part C of the Licence was updated in accordance with the Board's Standard Licence Conditions.⁹³ Part C, Condition 5 requires CZN to only submit security adjustment request with certain document submissions. The Board decided to only include the Closure and Reclamation Plan, and exclude Closure and Reclamation Completion Reports and Performance Assessment Reports. This is because these Plans are not specially required in this Licence, and the term of the Licence is only 5 years.

The Board has determined that the total security deposit amount shall be \$17,730,000; \$13,530,000 is required under the Licence and \$4,200,000 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. They are discussed together since the estimates deal with the same Project and are intimately linked.

5.5 Part D: Conditions Applying to Construction and Schedule 3

Part D of the Licence contains conditions applying to Construction activities for the Prairie Creek Mine. The Board has not made any changes to Part D from the previous Licence MV2008L2-0002, except for some administrative changes and the removal of Part D, Condition 14 of the previous Licence MV2008L2-0002.

In CZN's Status of Management Plan and Studies submitted with the renewal Applications, CZN indicated that the information to meet the requirements of Part D, Condition 14 of Licence MV2008L2-0002 had been submitted.⁹⁴ Part D, Condition 14 of Licence MV2008L2-0002 required CZN to conduct Acid Rock Drainage (ARD) and Metal Leaching (ML) analysis on the north side of the Water Storage Pond:

During or prior to excavation of overburden from the north side of the Water Storage Pond, the Licensee shall collect a total of 10 solids samples from different locations within the excavation area. All of the samples shall be submitted for acid base accounting (ABA) tests, and metals analyses. Five of the samples shall be submitted for shake flask extraction tests, including analysis of pH, acidity, alkalinity, sulphate, and dissolved metals. If any significant leaching potential is defined, an appropriate overburden disposal plan shall be submitted to the Board for approval.

⁹³ See www.mvlwb.com → Resources → Policies and Guidelines: [MVLWB Standard Water Licence Conditions and Schedules](#), dated April 20, 2020.

⁹⁴ See Water Licence MV2020L2-00003 Status of Management Plan and Studies ([hyperlink](#)), submitted to the MVLWB on May 19, 2020.

During the review of the draft conditions, Board staff sought clarification on whether an overburden disposal plan was submitted to the Board for approval.⁹⁵ In response, CZN noted that a report dated December 26, 2014 demonstrated that the backslope overburden sampling was submitted, and the report indicated that there is no leaching potential. Therefore, an overburden disposal plan was not submitted for Board approval. During the review of the draft conditions, GNWT-ENR contacted CZN to request a copy of the geochemical report and supported CZN's interpretation that the samples do not indicate potential for acid generation or Metal Leaching.⁹⁶ On the other hand, ADKFN commented that the condition wording "significant leaching potential" does not clearly define the criteria and requested to review the geochemical data.⁹⁷ ECCC also commented that it was unclear whether potential for significant leaching has been identified and recommended to include a timeline for the submission of the overburden disposal plan and revise the conditions to specify "significant metal leaching".⁹⁸

Following the public review of the draft conditions, Board staff followed up with CZN about the geochemical report. CZN provided a copy of the report to the Board, and it is now available on the Board's Public Registry.⁹⁹

The Board agrees with the Parties that the condition does not clearly define what "significant leaching potential" is. Although GNWT-ENR has reviewed the geochemical data, the Board recognizes that other Parties have not had the opportunity to review the geochemical data yet. The Board also notes that the condition does not require the geochemical data to be submitted for Board approval but requires the overburden disposal plan to be submitted for Board approval if any significant leaching potential is defined. For these reasons, the Board has decided to direct CZN to include the geochemical data for the north side of the Water Storage Pond with its forthcoming Applications for its updated mine plan. Moreover, a Design and Construction Plan as per the Board's Standard Licence Conditions could be required prior to Construction of the Water Storage Pond, which would require geochemical investigation for the Water Storage Pond. The public would have the opportunity to review the geochemical data of the Water Storage Pond with the context of the updated mine plan and to provide comments for the Board's consideration. The Board has included this direction in the Decision Letter as a reminder to CZN to submit the geochemical data with the future Applications for its updated mine plan. As a result, the Board has decided to remove this condition from Part D of Licence MV2020L2-0003.

5.6 Part E: Conditions Applying to Waste Management and Schedule 4

Part E and Schedule 4 of the Licence contains conditions related to Waste management activities for Prairie Creek Mine. The Board has not made any changes to Part E from the previous Licence MV2008L2-0002, except for Part E, Conditions 1 and 6. Part E, Conditions 5, 7, and 12 of Licence MV2020L2-0003 are also discussed below.

Part E, Condition 1: 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,

⁹⁵ See Review Comment Summary Table – Draft Conditions – MVLWB-ID-2, ([hyperlink](#)), dated November 3, 2020.

⁹⁶ See Review Comment Summary Table – Draft Conditions – GNWT-ENR-ID-3, ([hyperlink](#)), dated November 3, 2020.

⁹⁷ See Review Comment Summary Table – Draft Conditions – ADKFN-ID-5, ([hyperlink](#)), dated November 3, 2020.

⁹⁸ See Review Comment Summary Table – Draft Conditions – ECCC-ID-1, ([hyperlink](#)), dated November 3, 2020.

⁹⁹ See CZN's Letter to MVLWB re WSP Backslope Sampling Dec 26 2014 ([hyperlink](#)), dated November 4, 2020.

*Guidelines for Developing a Waste Management Plan.*¹⁰⁰ These guidelines can be applied to a wide range of projects and is 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 Applications dated May 13, 2020.¹⁰¹ In CZN's cover letter, CZN proposed to resubmit plans prior to Construction in order for CZN to incorporate updates to reflect the proposed Project changes. Part E, Condition 1 of the previous Licence MV2008L2-0002 required the Waste Management Plan six months prior to commencement of camp demolition and new camp Construction based on the schedule submitted at the time. Due to CZN's intentions to submit an updated mine plan and the current unforeseeable schedule, the Board has decided to change the submission timeline to six months prior to activities. The Board has also included the clause that CZN shall not commence any Construction activities prior to Board approval of the Plan.

During the review of the Applications, GNWT-Lands indicated that CZN must submit the Waste Management Plan to the Minister of Lands for approval, once approved by the Board.¹⁰² Board staff noted that the Spill Contingency Plan describes Tank Farm decant Water, which is defined as hazardous Waste if constituents are in excess of concentrations listed in Schedule 1 of the GNWT *Guidelines for Hazardous Waste Management*.¹⁰³ In response to Board staff comments, CZN described the management of Tank Farm decant Water as follows:

Water from the Tank Farm containment has never been contaminated requiring treatment, based on laboratory testing. Water from old diesel drums is processed using a charcoal filter and discharged into a clean drum for inspection. This water has always been visibly clean (no sheen or discolouration). From now on, we can sample this water as we do for Tank Farm containment water, and confirm the EPH concentration is below EQC prior to discharge.¹⁰⁴

The Board notes that the Tank Farm is existing site infrastructure and is currently regulated under CZN's exploration Licence MV2019L2-0006, Part E, Conditions 18 and 19, where CZN is required to meet EQC and notify an Inspector prior to Discharge. Once CZN is ready to proceed with mining and milling under the updated mine plan, the Board expects the management of Tank Farm decant Water to be consistent with the management during the exploration phase. Therefore, the Board directs CZN to include the management of Tank Farm decant Water in a revised Waste Management Plan in the next submission, whether it is with the new longer-term Applications with an updated mine plan or prior to commencement of activities as per Part E, Condition 1 of Licence MV2020L2-0003.

The Board notes that the Tank Farm is an example of existing infrastructure that the Board has required CZN to report on the care and maintenance activities in the Water Licence Annual Report as

¹⁰⁰ See www.mvlwb.com → Resources → Policies and Guidelines: [MVLWB Guidelines for Developing a Waste Management Plan](#) (March 31, 2011).

¹⁰¹ See CZN – Waste Management Plan ([hyperlink](#)), submitted to the MVLWB on May 13, 2020.

¹⁰² See Review Comment Summary Table – Application – GNWT-Lands ID-3 ([hyperlink](#)), dated June 18, 2020.

¹⁰³ See Review Comment Summary Table – Application – MVLWB ID-34 ([hyperlink](#)), dated June 18, 2020.

¹⁰⁴ See Review Comment Summary Table – Application – MVLWB ID-33 ([hyperlink](#)), dated June 18, 2020.

per Schedule 1, Condition 1. Given that the Tank Farm is regulated under the exploration Licence MV2019L2-0006, CZN can refer to the SNP and Annual Reports under the exploration Annual Report when submitting the mining and milling Annual Report. The Board encourages CZN to amalgamate the mining and milling and exploration authorizations to reduce overlapping reporting requirements and administrative burden.

The Board has not approved the Waste Management Plan at this time as CZN has indicated its intentions to submit a new longer-term Applications reflecting its updated mine plan. If CZN decides to commence activities under the Licence MV2020L2-0003, a revised Waste Management Plan is required a minimum of six months prior to commencement of activities.

Although the revised Waste Management Plan is required a minimum of six months prior to commencement of activities under Licence MV2020L2-0003, a Waste Management Plan is required with any Type A mining and milling applications. The Board expects CZN to submit a revised Waste Management Plan in accordance with the *MVLWB Guidelines for Developing a Waste Management Plan* when CZN submits the new Applications to reflect its updated mine plan. The Board encourages CZN to refer to the *MVLWB Guide to the Water Licensing Process* for requirements of management plans for Application completeness.¹⁰⁵

Part E, Condition 5: Waste Rock and Ore Storage Management Plan

The Board has not revised a submission timeline for the Waste Rock and Ore Storage Management Plan. Although Part E, Condition 5 requires the Plan six months prior to commencement of camp demolition and new camp Construction, this Plan could be required with the new longer-term Applications reflecting CZN's updated mine plan, especially if CZN is proposing changes to the management of Waste Rock and Ore. The Board encourages CZN to refer to the *MVLWB Guide to the Water Licensing Process* for requirements of the management plan for Application completeness.¹⁰⁶

Part E, Condition 6: Geochemical Investigation of Existing Mine Rock Pile below the 970 and 930 Portals

The previous Licence MV2008L2-0002 Part E, Condition 6 required CZN to conduct geochemical investigations of the existing Waste Rock Pile below the 970 and 930 portals. In CZN's Status of Management Plan and Studies submitted with the renewal Applications, CZN indicated that the samples were collected but the results were not reported yet.¹⁰⁷ Comments were not received on the submission timeline during the review of the draft conditions.

The Board notes that the management of the existing Waste Rock Pile below the 970 and 930 portals is one of the examples where existing mine infrastructure is not being managed as per the Licence requirements because CZN has not been ready to commence any activities since issuance of the previous Licence MV2008L2-0002. The Board notes that the purpose of the condition was to determine whether the existing Waste Rock Pile is contributing to metal loading. CZN conducted the investigation but did not provide the results. It is unknown how CZN is currently managing the

¹⁰⁵ See www.mvlwb.com → Resources → Policies and Guidelines: [MVLWB Guide to the Water Licensing Process](#), dated September 16, 2020.

¹⁰⁶ See www.mvlwb.com → Resources → Policies and Guidelines: [MVLWB Guide to the Water Licensing Process](#), dated September 16, 2020.

¹⁰⁷ See Water Licence MV2020L2-00003 Status of Management Plan and Studies ([hyperlink](#)), submitted to the MVLWB on May 19, 2020.

existing Mine Rock Pile, or if it is contributing to metal leaching. The Board notes this was already a reporting requirement in the previous Licence MV2008L2-0002. The Board expects this investigation to be reported in the Water Licence Annual Report as part of the care and maintenance activities as per Part B, Condition 14, Schedule 1, Condition 1, and Annex A, Part A, Condition 1, SNP Station 24 of Licence MV2020L2-0003. Further information can be found in Section 5.3 and 5.12 of these Reasons for Decision. The Board revised the compliance date of the investigation to be within 90 days following effective date of this Licence since CZN has already conducted the investigation. CZN is required to provide the investigation results in the SNP Reports and Annual Reports on or before March 31 each year.

Part E, Condition 7: Contaminant Loading Management Plan

The Board has not changed the submission timeline for a Contaminant Loading Management Plan. Although Part E, Condition 7 requires the Plan to be submitted six months prior to Mill Commissioning, this Plan could be required with the new longer-term Applications reflecting CZN's updated mine plan, especially if CZN is proposing changes to contaminant loading management at Prairie Creek Mine. The Board encourage CZN to refer to the *MVLWB Guide to the Water Licensing Process* for requirements of management plan for Application completeness.¹⁰⁸

The Board notes that the requirement for the Contaminant Loading Management Plan was based off of a commitment made by CZN during Environmental Assessment (EA0809-002) of the mining and milling activities at Prairie Creek Mine when CZN was proposing to transport bulk bags with concentrate on flat deck trailers along a winter road to the Tetcela Transfer Facility and the Liard Transfer Facility near the Liard Highway.¹⁰⁹ Following EA0809-002, CZN proposed to build an all season road from the Liard Highway to Prairie Creek Mine, instead of a winter road.¹¹⁰ This proposed Project change resulted in an Environmental Assessment (EA1415-01) for the Prairie Creek All Season Road.¹¹¹ During EA1415-01, the Contaminant Loading Management Plan was discussed, and CZN committed to updating the Plan to include both mining and road operations.

Permit MV2014F0013 was issued by the Board following the EA and regulatory process for the ASR.¹¹² As the Prairie Creek All Season Road Project also goes through Nahanni National Park, Permit PC2014F0013 was issued by Parks Canada.¹¹³ Similar to the previous mining and milling Licence MV2008L2-0002, Permit MV2014F0013 for the ASR also included a condition requiring CZN to submit a Contaminant Loading Management Plan. Permit PC2014F0013 authorized by Parks Canada included a similar requirement for CZN to submit a Contaminant Loading Management Plan. The Contaminant Loading Management Plan that is required to be submitted under Permit MV2014F0013 for the All Season Road Project must include details about contaminant loading management for the road, and be in accordance with the requirements of Condition 144. The Contaminant Loading Management Plan required by Part E, Condition 7 of MV2020L2-0003 must

¹⁰⁸ See www.mvlwb.com → Resources → Policies and Guidelines: [MVLWB Guide to the Water Licensing Process](#), dated September 16, 2020.

¹⁰⁹ See Review Board's [Public Registry for EA0809-002](#).

¹¹⁰ See MV2014L8-0006 – CZN – New LUP and WL Application ([hyperlink](#)), dated April 23, 2020.

¹¹¹ See Review Board's [Public Registry for EA1415-01](#).

¹¹² See MV2014F0013 – CZN – All Season Road Project – Type A Land Use Permit ([hyperlink](#)), dated November 13, 2019.

¹¹³ See PC2014F0013 – CZN – All Season Road Project – Type A Land Use Permit ([hyperlink](#)), dated November 28, 2020.

include details about contaminant loading management for Prairie Creek Mine and be in accordance with the requirements of Schedule 4, Condition 4.

If CZN wishes to develop one Contaminant Loading Management Plan that addresses contaminant loading management for both Prairie Creek Mine and the All-Season Road, CZN must clearly separate the management details for the mine and the road in the Plan. This is because the contaminant loading management needs to be approved under the mining and milling and ASR authorizations separately given the separate authorizations and different jurisdictions, including a Permit held by Parks Canada for the ASR. This will ensure that the appropriate section of the Contaminant Loading Management Plan can be reviewed under Licence MV2020L2-0003 as well as Permit MV2014F0013 and Permit PC2014F0013 separately.

Part E, Condition 12: Explosives Management Plan

The Board has not changed the submission timeline for an Explosive Management Plan. Although Part E, Condition 12 requires the Plan to be submitted six months prior to extracting Waste Rock from the underground mine, this Plan could be required with the new Applications reflecting CZN's updated mine plan, especially if CZN is proposing changes to the management of explosives. The Board encourage CZN to refer to the *MVLWB Guide to the Water Licensing Process* for requirements of management plan for Application completeness.¹¹⁴

The Board notes that explosives magazines currently exist on site as stated in Section 5.0 of these Reasons for Decision. Since an Explosive Management Plan is not submitted or required until extraction of Waste Rock, the Board has required CZN to report on how the existing explosives magazines are being managed during care and maintenance of the mine in the Annual Water Licence Report. Further information can be found in Section 5.3 of these Reasons for Decision.

5.7 Part F: Conditions Applying to Water and Wastewater Management and Schedule 5

Part F and Schedule 5 of the Licence contains conditions related to Water and Wastewater management for Prairie Creek Mine. The Board has carried over conditions from the previous Licence MV2008L2-0002 for Part F.

Part F, Condition 3: Inflow of Water into the Mine

During the review of the draft conditions, Board staff asked CZN to comment on whether the assessment of options to reduce the inflow of Water into the mine as required in Part F, Condition 3 of the draft Licence MV2020L2-0003 will be submitted with the future Licence and Permit Applications that will reflect the updated mine plan.¹¹⁵ In response, CZN indicated the assessment report will be formally submitted with the proposed future new Applications. CZN also proposed that the submission timeline for this assessment could be six months before Waste Rock production, instead of six months prior to Construction, because Construction can occur on surface before mine development and would not affect the mine Water. No other comments were received on the submission timeline for this requirement.

The Board understands the Construction of surface structures may not directly impact mine Water. However, the Board is of the opinion that the assessment of options to reduce the inflow of Water

¹¹⁴ See www.mvlwb.com → Resources → Policies and Guidelines: [MVLWB Guide to the Water Licensing Process](#), dated September 16, 2020.

¹¹⁵ See Review Comment Summary Table – Draft Conditions – MVLWB ID-4, ([hyperlink](#)), dated November 3, 2020. MV2020L2-0003 and MV2020D0007 - Canadian Zinc. Corporation – Prairie Creek Mine – Mining and Milling

into the mine could inform the designs for the structures such as the Water Storage Pond. As a result, the Board has not revised the submission time as proposed by CZN.

Part F, Condition 3-6: Construction Phase Water Management Plan and Operational Phase Water Management Plan

The Board has not changed the submission timeline for the Construction Phase Water Management Plan and Operational Phase Water Management Plan. Although Part F, Conditions 3 and 6 require these Plans six months prior to Construction and extracting Waste Rock, respectively, the Board notes that Waste and Wastewater Management Plan could be required with CZN's new Application, especially if CZN is proposing changes to management of Water and Wastewater. The Board encourages CZN to refer to the *MVLWB Guide to the Water Licensing Process* for requirements of management plans for Application completeness.¹¹⁶

Part F, Condition 9 - 15: Determination of Prairie Creek Flow Rates

Part F, Conditions 9 to 15 requires CZN to continuously estimate upstream creek flow to support the approval of the Variable Load Discharge. During the review of the draft conditions, Board staff sought input on Part F, Condition 9 of the previous Licence MV2008L2-0002:

The Licensee shall install a flow gauge in Prairie Creek at SNP Station 17, upstream of the point 5of effluent Discharge. The Licensee shall submit details of and rationale for the location of the gauge site to the Board upon request.

CZN had submitted a letter dated January 20, 2014 to satisfy the requirement of Part F, Condition 9.¹¹⁷ The letter notes that the flow gauge in Prairie Creek at SNP Station 17 was installed on June 3, 2013 and has been in continuous operation since. The purpose of collecting flow data at SNP Station 17 is to update the Protocol for the Estimation of Real-time Flows in Prairie Creek, which informs the Variable Load Discharge. CZN shall record the flow in accordance with Part F, Condition 9 and 10, provide the results in the SNP Reports as per Licence MV2020L2-0003, Annex A, Part C, Condition 1, and in the Annual Reports as per Schedule 1, Condition 1. See Section 5.12 of these Reasons for Decision for further information.

Licence MV2020L2-0003 Part F, Condition 11 requires CZN to submit the Protocol for Real-Time Estimation of Prairie Creek Flows three months prior to Discharge of any Effluent from SNP Station 13. If CZN proposes to seek approval of the Variable Load Discharge in the new Applications with the updated mine plan, the Board expects CZN to submit flow data in accordance with Part F, Conditions 9 to 15 to provide basis for the Variable Load Discharge for the updated mine plan.

Part F, Condition 16 and 17: Determination of Prairie Creek Water Quality

Part F, Conditions 16 and 17 requires baseline data to inform loads of parameters of potential concerns (POPC), which would inform Site-Specific Water Quality Objectives (SSWQO) and EQC. These conditions refer to SNP 16. Refer to Section 5.12 of these Reasons for Decision for further information on the requirements of SNP 16 during care and maintenance of the mine.

¹¹⁶ See www.mvlwb.com → Resources → Policies and Guidelines: [MVLWB Guide to the Water Licensing Process](#), dated September 16, 2020.

¹¹⁷ See CZN Letter regarding Flow Gauge Installation on Prairie Creek, ([hyperlink](#)), dated January 20, 2014. MV2020L2-0003 and MV2020D0007 - Canadian Zinc Corporation – Prairie Creek Mine – Mining and Milling

Although the Licence MV2020L2-0003 requires baseline Water quality data to be submitted three months prior to Discharge of any Effluent, the Board notes that baseline Water quality data should be submitted with CZN's new Mining and Milling Applications to reflect its updated mine plan. When CZN submits the new Applications with the updated mine plan, the Board expects CZN to submit the baseline Water quality data in Prairie Creek and use the data to inform SSWQO and EQC. The Board reminds CZN that the *MVLWB/GNWT Guidelines for Effluent Mixing Zones*¹¹⁸, and *MVLWB Water and Effluent Quality Management Policy*¹¹⁹ outline the types of information that should be submitted with the Applications to help the Board set the requirements for Effluent Discharge.

Part F, Condition 22-24: Effluent Quality Requirements

The Board has not changed requirements in Part F, Conditions 22 to 24. Part F, Condition 22 requires CZN to submit a Variable Load Discharge Protocol at least six months prior to discharging Effluent using Variable Load Discharge. When CZN submits the new Applications reflecting CZN's updated mine plan, the Board expects CZN to submit the Variable Load Discharge Protocol if CZN is still intending to seek approval of the Variable Load Discharge.

5.8 Part G: Conditions Applying to Aquatic Effects Monitoring Program and Schedule 6

Part G and Schedule 6 of the Licence contain conditions applying to Aquatic Effects Monitoring Program (AEMP) for Prairie Creek. The Board has set out the standard conditions for the submission of an AEMP Design Plan, an AEMP Annual Report, a periodic Re-evaluation Report, and, as needed, AEMP Response Plans. Schedule 6 details the requirements for the AEMP Design Plan and AEMP Annual Report.

CZN submitted a 2014 AEMP Design Plan with the Applications.¹²⁰ The 2014 AEMP Design Plan was not approved by the Board under Licence MV2008L2-0002. CZN's 2014 AEMP Design Plan does not conform with the *MVLWB/GNWT Guidelines for Aquatic Effects Monitoring Program (AEMP Guidelines)*.¹²¹ CZN noted in its cover letter that it intends to submit a revised AEMP Design Plan. When CZN submits the new Applications with the updated mine plan, the Board expects CZN to submit a revised AEMP Design Plan that conforms with the Board's AEMP Guidelines.

During the review of the draft conditions, ADKFN commented that the AEMP Design Plan be required within three months of the effective date of the Licence.¹²² In response, CZN disagreed and proposed the AEMP Design Plan submission timeline be tied with mine Construction for operations, but not exploration. ECCC recommended that the timing be tied to the start of Construction and be at least 12 months in advance of that.¹²³ GNWT-ENR recommended the submission timeline be one year prior to commencement of Mining Operations because GNWT-ENR believe this will avoid unnecessary submission and/or extension requests.¹²⁴ Racher Consulting, on behalf of NDDDB, and LKFN both commented CZN has committed to an AEMP Working Group in the upcoming year to facilitate

¹¹⁸ See www.mvlwb.com → Resources → Policies and Guidelines: [MVLWB/GNWT Guidelines for Effluent Mixing Zone](#) (September 2017).

¹¹⁹ See www.mvlwb.com → Resources → Policies and Guidelines: [MVLWB Water and Effluent Quality Management Policy](#) (March 31, 2011).

¹²⁰ See CZN – 2014 AEMP Design Plan ([hyperlink](#)), dated May 13, 2020.

¹²¹ See www.mvlwb.com → Resources → Policies and Guidelines: [MVLWB/GNWT Guidelines for Aquatic Effects Monitoring Program](#) (March 2019).

¹²² See Review Comment Summary Table – Draft Conditions – ADKFN ID-6, ([hyperlink](#)), dated November 3, 2020.

¹²³ See Review Comment Summary Table – Draft Conditions – ECCC ID-2, ([hyperlink](#)), dated November 3, 2020.

¹²⁴ See Review Comment Summary Table – Draft Conditions – GNWT-ENR ID-1, ([hyperlink](#)), dated November 3, 2020. MV2020L2-0003 and MV2020D0007 - Canadian Zinc. Corporation –

revisions to the AEMP Design Plan and recommended the submission timeline be prior to the start of Construction.¹²⁵ Board staff requested CZN to clarify what a realistic timeline would be for CZN to submit a complete AEMP Design Plan given the engagement and baseline data required.¹²⁶ In response, CZN noted that they are in general agreement with Racher's recommended timeline and proposed further revisions:

At least 3 months prior to the start of Construction, the Licensee shall submit to the Board, for approval, an AEMP Design Plan. The Licensee shall not begin Construction until the Board approves the Plan, and such approval will not be given if engagement has not been completed and until the Board is satisfied that suitable baseline data has been or will be collected before Construction.¹²⁷

CZN noted that they are uncertain whether "Construction" should be the trigger activity because CZN is of the opinion that Construction may not affect Effluent Discharge. CZN also proposed that the submission timeline be three years after the start of the Effluent Discharge because "implementation of the AEMP design plan doesn't necessarily mean Effluent Discharge".¹²⁸

The Board has considered all Party's and CZN's recommended timelines for the submission of the AEMP Design Plan. As described in the Board's AEMP Guidelines, AEMP Design Plan should be informed by inputs from AEMP Working Groups, which could be used to identify baseline data gaps. Given that CZN is intending to host an AEMP Working Group in the next year and submit an updated AEMP Design Plan in accordance with the Board's AEMP Guidelines, substantial changes could be made to the Design Plan. The Board understands that CZN has already collected some baseline data, but it is likely that CZN could be required to collect additional baseline data pending the input from the AEMP Working Group. Based on the Board's experience with the approval process of AEMP Design Plans, the Board has determined that the AEMP Design Plan should be submitted one year prior to commencement of Construction. The Board has not adopted CZN's trigger activity of "three years after effluent discharge" because the AEMP is meant to monitor Project-related effects on the aquatic ecosystem, therefore, the Design Plan should be approved and implemented before Effluent is discharged, and not after. The Board has decided that Construction should be the trigger activity for the submission of the AEMP Design Plan because Project-related effects include Construction activities as well. Monitoring data during the Construction phase is required to monitor any effects of Construction activities, and monitoring data is also required for comparison with predictions.

Although the Board has set the submission timeline of the AEMP Design Plan to be one year prior to Construction for the Licence MV2020L2-0003, the Board notes that an AEMP Design Plan is required with any Type A mining and milling applications. Therefore, the Board expects CZN to submit an updated AEMP Design Plan in accordance with the Board's AEMP Guidelines when CZN applies for the new longer-term Applications to reflect its updated mine plan. The Board will not accept the 2014 AEMP Design Plan as part of the new Applications because it is a more efficient use of Board and reviewer time to review Plans that conform with Board guidelines. The Board encourages CZN to host the AEMP Working Group as early as possible to identify the baseline data gap and collect any additional baseline data. This will reduce delays in permitting and Construction after licence issuance.

¹²⁵ See Review Comment Summary Table – Draft Conditions – LKFN ID-3; Racher ID-4, ([hyperlink](#)), dated November 3, 2020.

¹²⁶ See Review Comment Summary Table – Draft Conditions – MVLWB ID-5, ([hyperlink](#)), dated November 3, 2020.

¹²⁷ See Review Comment Summary Table – Draft Conditions – MVLWB ID-5, ([hyperlink](#)), dated November 3, 2020.

¹²⁸ See Review Comment Summary Table – Draft Conditions – CZN ID-6, ([hyperlink](#)), dated November 3, 2020.

Part G, Condition 5 requires the submission of an AEMP Annual Report, and Schedule 6 stipulates the requirements of the AEMP Annual Report. The Board's Standard Licence Conditions requires a specific date for the Annual Report to be submitted. During the review of the draft conditions, CZN proposed that the AEMP Annual Report be required after Effluent Discharge has commenced.¹²⁹ No other comments were received on the submission timeline of the AEMP Annual Report.

The Board has decided the submission timeline should be tied with the implementation of the AEMP Design Plan to avoid unnecessary submissions and extension requests. The Board hereby requires the AEMP Annual Report to be submitted "Beginning May 1 of the year following the implementation of the AEMP Design Plan, and no later than May 1 of each year thereafter".

The previous Licence MV2008L2-0002 required a bull trout monitoring program and monitoring in the Nahanni River, which are specific to the Prairie Creek Mine. The Board decided to include Schedule 6, Condition 1 to capture these specific requirements.

5.9 Part H: Conditions Applying to Contingency Planning

Part H and Schedule 7 of the Licence contain conditions related to spill contingency planning and reporting, reclamation of spills and Unauthorized Discharges, emergency response, and contingency planning for the Prairie Creek Mine. 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 cleaned up, with the goal of preventing or limiting damage to the Receiving Environment. The conditions in Part H are based on conditions that were in the previous Licence MV2008L2-0002, with administrative updates made, as necessary.

Part H, Condition 1: 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*.¹³⁰ CZN included a Spill Contingency Plan in the Applications dated May 13, 2020.¹³¹ In CZN's cover letter, CZN proposed to resubmit plans prior to Construction in order for CZN to incorporate updates to reflect the proposed Project changes. Part H, Condition 1 of the previous Licence MV2008L2-0002 required the Spill Contingency Plan be submitted six months prior to commencement of camp demolition and new camp Construction based on the Project schedule at the time. Due to CZN's intentions to submit an updated mine plan and the current unforeseeable schedule, the Board has decided to change the submission timeline to six months prior to activities. The Board has also included the clause that CZN shall not commence any Construction activities prior to Board approval of the Plan.

During the review of the Applications, GNWT-Lands indicated that CZN must submit the Spill Contingency Plan to the Minister of Lands for approval, once approved by the Board.¹³² Board staff asked CZN to clarify if the Spill Contingency Plan submitted with the Applications reflects the current

¹²⁹ See Review Comment Summary Table – Draft Conditions – CZN ID-7, ([hyperlink](#)), dated November 3, 2020.

¹³⁰ See www.mvlwb.com → Resources → Policies and Guidelines: [INAC Guidelines for Spill Contingency Planning](#) (April 2007).

¹³¹ See CZN – Spill Contingency Plan ([hyperlink](#)), submitted to the MVLWB on May 13, 2020.

¹³² See Review Comment Summary Table – Application – GNWT-Lands ID-1 ([hyperlink](#)), dated June 18, 2020.

status of the mine site (care and maintenance).¹³³ CZN's response indicated that the Plan submitted is intended for a future mine Construction period, and that all facilities are already covered by the recently reviewed and updated plan for exploration. In their response CZN reiterated that the Plan would be updated for Construction before operations to ensure all facilities are properly encompassed in the Plan.

The Board discussed care and maintenance activities in Section 5.3 of these Reasons for Decision, and Part B, Condition 14 and Schedule 1, Condition 1 outlines the requirements for reporting on care and maintenance activities. The Board believes that the reporting requirements associated with care and maintenance will adequately cover spill contingency considerations at Prairie Creek Mine prior to Construction associated with mining and milling.

Board staff also asked several detailed questions about the Spill Contingency Plan that CZN submitted with the Applications.¹³⁴ In response CZN submitted further information that would be beneficial to be included in a future version of the Spill Contingency Plan. The Board directs CZN to update the next version of the Spill Contingency Plan to reflect updates as agreed to in response to Board staff comments, or additional information provided by CZN in response to Board staff comments.

The Board has not approved the Spill Contingency Plan at this time as CZN has indicated its intentions to submit a new longer-term Applications reflecting its updated mine plan. If CZN decides to commence activities under the Licence MV2020L2-0003, a revised Spill Contingency Plan is required a minimum of six months prior to commencement of activities.

Although the revised Spill Contingency Plan is required a minimum of six months prior to commencement of activities under Licence MV2020L2-0003, a Spill Contingency Plan is required with any Type A mining and milling applications. The Board expects CZN to submit a revised Spill Contingency Plan in accordance with the *INAC Guidelines for Spill Contingency Planning*, and Board directives in the Board's decision letter when CZN submits the new longer-term Applications to reflect its updated mine plan. The Board also encourages CZN to refer to the *MVLWB Guide to the Water Licensing Process* for requirements of management plans for Application completeness.¹³⁵

Part H, Conditions 2 - 4: Failure Modes and Effects Analysis

In the Report of EA and Reasons for Decision for EA0809-002, the Review Board noted that "Construction of a second pond may address a broader range of risks and result in better water management on site and improved water quality in Prairie Creek. The Review Board suggests that the Mackenzie Valley Land and Water Board consider this during the licensing phase".¹³⁶ During the regulatory proceeding for Licence MV2008L2-0002 and Permit MV2008D0014, Parties recommended that CZN construct a second Water storage pond and expand the existing Water Storage Pond, although CZN disagreed that a second Water storage pond needed to be built.¹³⁷ To address the unresolved issue, the Board included a condition in Licence MV2008L2-0002 requiring CZN to perform a Failure Modes and Effects Analysis (FMEA). The intent of the analysis was to ensure the company

¹³³ See Review Comment Summary Table – Application – MVLWB ID-14 ([hyperlink](#)), dated June 18, 2020.

¹³⁴ See Review Comment Summary Table – Application – MVLWB ID-18-21, 25-27, 29, 34 ([hyperlink](#)), dated June 18, 2020.

¹³⁵ See www.mvlwb.com → Resources → Policies and Guidelines: [MVLWB Guide to the Water Licensing Process](#), dated September 16, 2020.

¹³⁶ See MVEIRB Registry - Environmental Assessment EA 0809-002 ([hyperlink](#)).

¹³⁷ See Reasons for Decision for Licence MV2008L2-0002 and Permit MV2008D0014 ([hyperlink](#)), dated July 30, 2013. MV2020L2-0003 and MV2020D0007 - Canadian Zinc. Corporation –

would be prepared to respond to Project upsets and failures that could have adverse impacts on Water quantity and quality. The analysis was to include an assessment of the need for the second Water storage pond.

Following issuance of Water Licence MV2008L2-0002 on September 23, 2013, the Board issued directives for the FMEA to CZN on October 22, 2013.¹³⁸ In the Board's letter with the FMEA directives the Board indicated that the results of the FMEA must be submitted on or before April 23, 2014. However, on May 22, 2015 the Board approved a request by CZN to change the compliance date for the FMEA in the Licence to require it be due "no later than 2 years prior to extracting Waste Rock from the underground mine in accordance with the Licence".¹³⁹

The FMEA was never submitted under Licence MV2008L2-0002. The Licence MV2020L2-0003 conditions for the FMEA (Part H, Conditions 2, 3, and 4) include an incorporation of the October 22, 2013 Board directives so that all FMEA requirements are included in Part H, Schedule 7, or Annex D of Licence MV2020L2-0003, rather than in two separate documents. During the public review of the draft conditions, CZN argued that more FMEA details had been inserted into the body of the draft Licence MV2020L2-0003 compared to MV2008L2-0002.¹⁴⁰ CZN indicated disagreement with this approach as they believe the details should be left in the schedule to make them easier to adjust later as necessary, and recommended the Board "change the conditions back to what they were in MV2008L2-0002". The Board did not receive any other comments from Parties about the FMEA requirements.

The Board notes that when the directives for the FMEA were issued to CZN on October 22, 2013 the directives were not added to a schedule of Licence MV2008L2-0002, and the intention was not for the directives to be adjusted later. CZN was required to develop the FMEA as per the October 22, 2013 Board directives, and the Board believes that the directives are still relevant given no changes have been proposed to the Project. For these reasons, the Board has decided to leave all detailed requirements for the FMEA in Part H, Conditions 2, 3, and 4, Schedule 7, and Annex D of Licence MV2020L2-0003. If CZN is intending to seek changes to the FMEA requirements when the new Applications are submitted to reflect the updated Mine Plan, sufficient rationale must be provided for the proposed changes.

5.10 Part I: Conditions Applying to Closure and Reclamation

Part I of the draft Licence conditions included a condition that would require CZN to submit a Care and Maintenance Plan for approval within 90 days following the effective date of the Licence, to be in accordance with the requirement of the draft Schedule 8. Based on the public review of the draft conditions, the Board has decided to remove the condition that would require a Care and Maintenance Plan from Part I. Instead, CZN will be required to include care and maintenance activity details in the Annual Report as per Part B, Condition 14 and Schedule 1, Condition 1. The Board's reasons are described above in Section 5.3.

Part I, Conditions 1-5: Closure and Reclamation

Part I of the Licence contain conditions applying to Closure and Reclamation of the Project. The Board notes that all Closure and Reclamation Plans shall be in accordance with the Mackenzie Valley Land

¹³⁸ See Board Directive for the Failure Modes and Effects Analysis ([hyperlink](#)), dated October 22, 2013.

¹³⁹ See Compliance Dates Request Approval Letter ([hyperlink](#)), dated May 22, 2015.

¹⁴⁰ See Review Comment Summary Table – Draft Conditions – CZN ID-8, ([hyperlink](#)), dated November 3, 2020.

and Water Board and Aboriginal Affairs and Northern Development Canada's *Guidelines for the Closure and Reclamation of Advances Mineral Exploration and Mine Sites in the Northwest Territories* (Closure Guidelines).¹⁴¹ CZN included a Closure and Reclamation Plan (CRP) in the Applications.¹⁴²

During the public review of the Applications, ADKFN commented that they did not agree with the timeframe for post-closure monitoring that CZN presented in the CRP.¹⁴³ ADKFN also commented that CZN provide a more detailed contingency plan for Water quality risks for operations and during closure.¹⁴⁴ The GNWT-Lands Inspector commented on the Temporary Closure Activities section of the CRP, recommending that all buildings and infrastructure be adequately secured to prevent wildlife from entering the building.¹⁴⁵ GNWT-Lands commented that CZN must submit any revised or updated Interim Closure and Reclamation Plan to the Minister of Lands for review and agreement, once approved by the MVLWB.¹⁴⁶ Further, GNWT-Lands indicated their support for the draft condition that required the submission of the CRP six months prior to extracting Waste Rock.¹⁴⁷ Finally, Board staff asked CZN to clarify that the CRP submitted by CZN should be considered to be a conceptual plan, and included several follow up comments and recommendations related to CZN's CRP and the Board's Closure Guidelines.¹⁴⁸

CZN's responses to comments indicated their preference for the Board to defer consideration of the CRP to a future date linked to Project commencement.¹⁴⁹ In response to Board staff's comments and recommendations, CZN agreed that the CRP that was submitted with the Applications was in conceptual form, and that "subsequent comments are intended to inform future versions of the plan".¹⁵⁰

Consistent with the previous Licence MV2008L2-0002, the Board has set the submission timeline of the CRP to be six months prior to extracting Waste Rock from the underground mine. The Board notes that a CRP is required with any Type A mining and milling applications. Therefore, the Board expects CZN to submit an updated conceptual CRP in accordance with the Board's Closure Guidelines when CZN applies for the new Applications to reflect its updated mine plan. The Board also encourages CZN to refer to the *MVLWB Guide to the Water Licensing Process* for requirements of management plans for Application completeness.¹⁵¹

5.11 Part J: Conditions Applying to Modifications

Part J of the Licence contains conditions outlining when and how modifications of existing or planned physical works may be authorized. They ensure the Board, and the Inspector are kept informed and

¹⁴¹ 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](#) (November 2013).

¹⁴² See CZN – Closure and Reclamation Plan ([hyperlink](#)), submitted to the MVLWB on May 13, 2020.

¹⁴³ See Review Comment Summary Table – Application – AKDFN ID-5 ([hyperlink](#)), dated June 18, 2020.

¹⁴⁴ See Review Comment Summary Table – Application – AKDFN ID-6 ([hyperlink](#)), dated June 18, 2020.

¹⁴⁵ See Review Comment Summary Table – Application – GNWT-Lands Dehcho Region ID-5 ([hyperlink](#)), dated June 18, 2020.

¹⁴⁶ See Review Comment Summary Table – Application – GNWT-Lands ID-4, 7 ([hyperlink](#)), dated June 18, 2020.

¹⁴⁷ See Review Comment Summary Table – Application – GNWT-Lands ID-5 ([hyperlink](#)), dated June 18, 2020.

¹⁴⁸ See Review Comment Summary Table – Application – MVLWB ID-38-49 ([hyperlink](#)), dated June 18, 2020.

¹⁴⁹ See Review Comment Summary Table – Application – GNWT-Lands Dehcho Region ID-5 ([hyperlink](#)), dated June 18, 2020.

¹⁵⁰ See Review Comment Summary Table – Application – MVLWB ID-38 ([hyperlink](#)), dated June 18, 2020.

¹⁵¹ See www.mvlwb.com → Resources → Policies and Guidelines: [MVLWB Guide to the Water Licensing Process](#), dated September 16, 2020.

have an opportunity to request more information or reject the proposed modification. This section is closely linked to the Construction section (Part D), which contains conditions related to the design and Construction of Engineered Structures. This section relies on the definition of a Modification, outlined in Part A as “does not include expansions, nor alternations of the purpose of function of a structure.” The purpose of Part J is to streamline the process for authorizing Modifications and ensure that any proposed changes to structures that might be outside the scope of the Licence are brought to the Board’s attention.

The Board’s current Standard Licence Conditions do not include a section for modifications. The section was not included in the Standard Licence Conditions list as Project changes can be addressed clearer and consistently through the revision process for design and management plans. However, because the Board has decided to keep Water Licence MV2020L2-0003 largely unchanged compared to the previous Licence MV2008L2-0002 for mining and milling at Prairie Creek Mine, the Board has carried over the Modification conditions from the previous Licence MV2008L2-0002.

5.12 Annex A: Surveillance Network Program

Annex A of the Licence contains conditions applying to the SNP. CZN has not been submitting SNP reports since the issuance of the previous Licence MV2008L2-0002. The Board notes that CZN is required to submit SNP reports even if activities have not commenced. The Board recognizes the SNP requirements do not reflect the mine’s care and maintenance status, and that not all SNP stations need to be sampled during care and maintenance. No comments were received during the review on requirements of SNP stations; therefore, the Board has not revised the SNP requirements from the previous Licence MV2008L2-0002. However, the Board has clarified the status of the SNP and clarified stations that must be reported on while Prairie Creek is in care and maintenance. CZN shall submit SNP reports for the active SNP stations.

If CZN believes changes are required to the reporting requirements during care and maintenance of the mine, CZN may submit a change to the status of the SNP stations with sufficient rationale. The Board notes that some SNP stations overlap with the exploration Licence MV2019L2-0006 and encourages CZN to amalgamate the authorizations to reduce duplication of reporting requirements.

SNP 01 is for sampling the potable Water withdrawn from the well house and ensuring potable Water meets Drinking Water Quality Guidelines. The Board notes this sampling station currently overlaps with SNP Stations 3-1 under exploration Licence MV2019L2-0006, but only a subset of parameters is required to be measured as per SNP 3-1 under MV2019L2-0006. The Board notes that the difference in sampling requirements is due to the difference in personnel on site during exploration and mining and milling activities. In CZN’s approved Waste Management Plan (Version 2) under exploration Licence MV2019L2-0006, CZN indicated that “If significant on-site activity requires in excess of 40 personnel, the Mine’s Sewage Treatment Plant will be made operational.” If the Sewage Treatment Plant becomes operational, it is important to sample Total Coliforms, *Escherichia coli*, pH, and turbidity monthly to ensure potable Water is safe to drink. Therefore, the Board has set the status of SNP Station 01 to active when Sewage Treatment Plant is operating. CZN shall follow the sampling requirements under SNP 01, and provide the results in SNP Reports as per Licence MV2020L2-0003, Annex A, Part C, Condition 1, and report the quantities in the Annual Reports as per Schedule 1, Condition 1. For parameters where there is overlap in monitoring at SNP 3-1 under MV2019L2-0006 and SNP 01 under MV2020L2-0003, results should still be reported in both SNP and Annual Reports for both authorizations. The Board notes this is an example where it is confusing that CZN has separate authorizations for the same mine site. Overlapping reporting requirements are an administrative burden to the Board, the Proponent, and Parties. As discussed in Section 5.0 of these Reasons for

Decision, the Board encourages CZN to consider amalgamating the authorizations to reduce the overlap in scope and reporting requirements.

SNP 02 is for ensuring the existing Sewage Treatment Plant is operating effectively. In CZN's approved Waste Management Plan (Version 2) under exploration Licence MV2019L2-0006, CZN indicated that "If significant on-site activity requires in excess of 40 personnel, the Mine's Sewage Treatment Plant will be made operational." The Board notes that this sampling requirement is not under exploration Licence MV2019L2-0006. The Board notes that if CZN uses the Sewage Treatment Plant, CZN must follow the sampling requirements under SNP 02, and provide the results in the SNP Reports as per Licence MV2020L2-0003, Annex A, Part C, Condition 1, and report the quantities in the Annual Reports as per Schedule 1, Condition 1. Consequently, the Board has set the status of the SNP 02 to "Active when Sewage Treatment Plant is operating". The Board notes this is an example where it is confusing that CZN has separate authorizations for the same mine site. Overlapping reporting requirements are an administrative burden to the Board and the Proponent. As discussed in Section 5.0 of these Reasons for Decision, the Board encourages CZN to consider amalgamating the authorizations to reduce the overlap in scope and reporting requirements.

SNP 03 is operational monitoring to determine the amount and quality of Water collected from the underground mine prior to entering the Water Storage Pond. The Board has set the status of SNP 03 to inactive as Prairie Creek Mine is under care and maintenance and not in mining and milling operations.

SNP 04 are the sampling requirements for the Waste Rock Pile. Schedule 4, Condition 3 requires CZN to sample in accordance with the requirements of SNP 04 if any Seepage is found in any existing Waste Rock Pile. CZN should have been monitoring at this station and reporting under Licence MV2008L2-0002 because the Waste Rock Pile is currently existing on site. The Board expects CZN to monitor and sample if there is any Seepage and provide the results in the SNP Reports as per Licence MV2020L2-0003, Annex A, Part C, Condition 1, and the Annual Reports as per Schedule 1, Condition 1. CZN shall clearly indicate whether Seepage is found during reporting. The Board has set the status of SNP 04 to "Active during care and maintenance".

SNP 05 is for sampling Effluent from Cell B to Water Treatment Facilities to determine the efficiency of metals removal resulting from treatment. The Board has set SNP 05 to inactive during care and maintenance.

SNP 06 is for sampling Mill Effluent to Cell A of the Water Storage Pond for determining residence time within the Water Storage Pond, and the effect of residence time on the chemistry. The Board has set SNP 06 to inactive during care and maintenance.

SNP 07 is for sampling Cell A to Water Treatment Facilities to determine the efficiency of metals removal resulting from treatment. The Board has set SNP 07 to inactive during care and maintenance.

SNP 08 is for sampling Effluent from the Water Treatment Facilities to determine if the Water Treatment Plant is meeting performance objectives. The Board has set SNP 08 to inactive during care and maintenance.

SNP 09 is for sampling around the stockpiles at the airstrip during and following Construction. The Board has set SNP 09 to inactive during care and maintenance.

SNP 10 is for sampling the west diversion ditch of the Water Storage Pond during Construction. The Board has set SNP 10 to inactive during care and maintenance.

SNP 11 is for sampling the Mill ditch to determine the amount of additional metal loading reporting to the Catchment Pond. The Board has set SNP 11 to inactive during care and maintenance.

SNP 12 is for sampling the site ditch sump to determine the amount and quality of Water from general site runoff that is reporting to the Water Storage Pond. The Board as set SNP 12 to inactive during care and maintenance.

SNP 13 is for sampling the Catchment Pond Discharge to Exfiltration Trench, which is the point of compliance for Discharges from the site. The Board has set SNP 13 to inactive during care and maintenance.

SNP 14 is sampling Harrison Creek upstream to determine the chemistry of Harrison Creek Water prior to any loadings from the mine area as a basis for comparing with downstream Water quality. The Board has set SNP 14 to inactive during care and maintenance.

SNP Station 14a is for determining whether there are any changes in Water quality resulting from the Waste Rock Pile or historical Waste Rock Pile located adjacent to Harrison Creek. The Board notes that CZN should be sampling at this station during care and maintenance to determine if any existing Waste Rock Pile is impacting the Receiving Environment. The Board expects CZN to sample under SNP 14a and provide the results in the SNP Reports as per Licence MV2020L2-0003, Annex A, Part C, Condition 1, and the Annual Reports as per Schedule 1, Condition 1. Therefore, the Board has set SNP 14a to active during care and maintenance.

SNP 15 is for sampling Harrison Creek immediately above Prairie Creek to establish whether there are any changes in Water quality resulting from surface runoff or Groundwater discharges from the Mill or Catchment Pond. The Board has set SNP 15 to inactive during care and maintenance.

SNP station 16 is for determining chemistry of Prairie Creek Water prior to any loadings from the mine area as a basis for determining background loadings and for comparing with downstream Water quality. The data collected from SNP 16 is required to inform Part F, Conditions 16 and 17, which is used to determine the baseline Water Quality in Prairie Creek. Baseline data is required to inform site-specific Water quality objectives (SSWQO) and EQC for Prairie Creek Mine. This baseline data will be important for when CZN submits the new Applications to reflect its updated mine plan. It is unknown how much baseline data CZN has collected since the issuance of previous Licence MV2008L2-0002 because CZN has not submitted any SNP reports. The Board has decided to set SNP 16 to active during care and maintenance. The Board expects CZN to sample SNP 16 and provide the results in SNP Reports as per Licence MV2020L2-0003, Annex A, Part C, Condition 1, and the Annual Reports as per Schedule 1, Condition 1. Once sufficient baseline data is collected under this SNP station to inform SSWQO and EQC, CZN can request to the Board to change the status of this station.

SNP 17 is for deriving flow at Prairie Creek for calculating allowable discharge from the mine. This SNP station is required to satisfy Part F, Conditions 9 and 10. The flow rate in Prairie Creek is required to support the basis for Variable Load Discharge. The flow gauge should collect flow data to update the Protocol for the Estimation of Real-time Flows as per Part F, Condition 11 of the Licence. CZN has indicated in its Application that the gauge has been installed, but CZN has not been reporting the flow

data from this station.¹⁵² The Board has set SNP 17 to active during care and maintenance to satisfy Part F, Condition 10, which requires at least 12 simultaneous stage and discharge measurements at SNP 17. The Board expects CZN to sample at SNP 17 and provide the results in SNP Reports as per Licence MV2020L2-0003, Annex A, Part C, Condition 1, and the Annual Reports as per Schedule 1, Condition 1. The Board also expects CZN to use the flow data to support the allowable discharge proposed in CZN's new Application with the updated mine plan. CZN can submit a request to change the Status of SNP 17 once CZN has demonstrated that Part F, Condition 10 has been satisfied.

SNP 18 and 19 are for sampling at Prairie Creek at the downstream edge of the Initial Dilution Zone and Prairie Creek downstream, respectively, to assess whether the Discharge approach is successful at meeting receiving Water Quality Objectives. The Board has set SNP 18 and 19 to inactive because operational Discharge will not be occurring during care and maintenance of the mine.

SNP 20 and 21 is for sampling the Water Storage Pond Cell A and Cell B, respectively, for confirmation of the Water balance. The Board has set these SNP stations to inactive during care and maintenance.

SNP 22 and 23 are for sampling the ore storage area and paste plant storage area drainage/sump, respectively, to determine Water quality reporting to the Water Storage Pond. The Board has set these SNP stations to inactive during care and maintenance.

SNP Station 24 and is to assess whether the existing Waste Rock Pile below the 930 and 970 level is an appreciable source of loading to Harrison Creek and establish long-term Water quality associated with Waste Rock sources to inform updated closure plans. CZN should be sampling and reporting at this station during care and maintenance as the existing Waste Rock Pile could be releasing contaminants to the Receiving Environment. The Board expects CZN to sample at SNP 24 and provide the results in SNP Reports as per Licence MV2020L2-0003, Annex A, Part C, Condition 1, and the Annual Reports as per Schedule 1, Condition 1. The Board has set the status of SNP 24 to active during care and maintenance.

5.13 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.

5.14 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.

¹⁵² See Water Licence MV2020L2-00003 Status of Management Plan and Studies ([hyperlink](#)), submitted to the MVLWB on May 19, 2020.

6.0 Decision – Land Use Permit MV2020D0007

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

- 1) The Report of Environmental Assessment EA0809-002 and the suggestions therein, as approved by the Responsible Minister;
- 2) The Reasons for Decision for Permit MV2008D0014;
- 3) The comments and recommendations made during the regulatory processes;
- 4) The evidence and submissions from CZN received by the Board;
- 5) The written comments and submissions from Parties received by the Board; and
- 6) 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 MV2020D0007 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, defined terms, 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.

Given that CZN requested that there be no change for the Permit MV2020D0007 renewal, the Board decided that the Permit conditions would remain predominantly unchanged compared to the previous Permit MV2008D0014. Further information on the decisions for issuance of Permit MV2008D0014 and Licence MV2008L2-0002 can be found in the Reasons for Decision dated July 30, 2013.¹⁵³ Additional information on the Board's decision on Permit MV2008D0014 amendment and Licence MV2008L2-0002 schedule change can be found in the Reasons for Decision dated May 21, 2015.¹⁵⁴

However, the Board has, where appropriate, made administrative updates and clarifications to the conditions to be consistent with other recently issued Type A permits and the *MVLWB Standard Land Use Permit Conditions Template* (Standard Permit Conditions).¹⁵⁵ As described in Section 5.0 of these Reasons, the Board decided not to change the renewed Licence MV2020L2-0003 conditions to align with the Board's Standard Licence Conditions. Consistent with this decision, the Board has also decided to not update all Permit conditions in accordance with the Board's Standard Permit Conditions, with some exceptions of legislative references and Board policies and guidelines, where appropriate. CZN has explicitly stated that a land use permit application for an updated mine plan is forthcoming¹⁵⁶, therefore, the Board will update the conditions to be in accordance with the Board's Standard Permit Conditions, and considering the updated Project Description, during that future proceeding.

6.1 Term of Permit

CZN has applied for a term of 5 years for the Permit. No Parties expressed concerns with the term proposed by CZN. Subsections 26(5) of the MVLUR allows for a Permit term of not more than five

¹⁵³ See Reasons for Decision for Licence MV2008L2-0002 and Permit MV2008D0014 ([hyperlink](#)), dated July 30, 2013.

¹⁵⁴ See Reasons for Decision for Licence MV2008L2-0002 schedule change and Permit MV2008D0014 amendment ([hyperlink](#)), dated May 21, 2015.

¹⁵⁵ See www.mvlwb.com → Resources → Policies and Guidelines: [MVLWB Standard Land Use Permit Conditions Template Version 2.3](#), dated April 20, 2020.

¹⁵⁶ See Review Comment Summary Table – Draft Conditions – MVLWB-ID-7, ([hyperlink](#)), dated November 3, 2020. MV2020L2-0003 and MV2020D0007 - Canadian Zinc Corporation – Prairie Creek Mine – Mining and Milling

years. After reviewing the submissions made during this regulatory process, the Board has determined an appropriate term for this undertaking is 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.

No comments or concerns regarding the scope of Permit MV2020D0007 were made during the public review of the draft conditions. The Board has decided the scope of the Permit to remain unchanged from the previous Licence MV2008L2-0002, except for some administrative updates.

6.3 Part B: Defined Terms

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. Review comments were not received with respect to definitions in the Permit. The definitions in the Permit have remained unchanged from the previous Permit MV2008D0014, except for administrative updates.

6.4 Part C: Conditions Applying to All Activities

The subheadings below correspond to the headings in the conditions section of the Permit, as outlined in section 26(1) of the MVLUR. Most conditions in the Permit are from the the previous Permit MV2008D0014, 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)(d) Methods and Techniques

During the review of the draft conditions, ADKFN commented on the condition called Trucks/vehicles or machinery Leaving the Concentrate Shed.¹⁵⁷ Specifically, ADKFN commented that “it is not clear what constitutes ensuring that a truck/vehicle or machinery is free of contaminants”. AKDFN recommended CZN provide further details to ensure vehicles are free of contaminants, stating that “ADKFN requires this information to adequately assess the impacts to our Treaty and/or Aboriginal rights and interests including with respect to truck/vehicle transportation through ADKFN’s territory”. CZN responded that they believe the condition is related to concentrate loading and dust control, and that the Board had addressed this by requiring a Contaminant Loading Management Plan.

The Board notes that Part E, Condition 7 of Licence MV2020L2-0003 includes a requirement for CZN to submit a Contaminant Loading Management Plan to the Board for approval six months prior to Mill Commissioning. This condition was in the previous Licence MV2008L2-0002 and is discussed more in Section 5.6 of these Reasons for Decision. The requirements for the Contaminant Loading Management Plan are set out in Schedule 4, Condition 4, and include: identifying potential sources of contaminants; mitigation approaches; monitoring, including baseline during Mining Operations; defining Action Levels; and actions that will be taken following an Action Level exceedance. Consequently, the Board believes that ADKFN’s concern about contaminants will be addressed in the Contaminant Loading Management Plan. ADKFN will have the opportunity to review the Plan when it

¹⁵⁷ See Review Comment Summary Table – Draft Conditions – ADKFN-ID-3, ([hyperlink](#)), dated November 3, 2020. MV2020L2-0003 and MV2020D0007 - Canadian Zinc. Corporation – Prairie Creek Mine – Mining and Milling

is submitted. For the reasons above, the Board has left the Trucks/vehicles or machinery Leaving the Concentrate Shed condition in the Permit.

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

A Waste Management Plan is a standard requirement for land use 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 Part E of the Licence and the Board's reasons for including this Plan, and requiring revisions and re-submittals, are described above in Section 5.6 of these Reasons for Decision. 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 described above in Section 5.4 of these Reasons for Decision, in conjunction with reasons for security required by the Licence. A detailed explanation of how the Board determined the security deposits for these two instruments is provided in Appendix 1: Reclamation Security for Prairie Creek Mine. The security deposits required by these two instruments are discussed together since the estimates deal with the same Project and are intimately linked.

26(1)(m) Fuel Storage

A Spill Contingency Plan is a standard requirement for land use permits issued by the Board. This Plan is intended to ensure that an action plan(s) for responses to spills and Unauthorized Discharges has been established to effectively control and clean up spills and Unauthorized Discharges, with the goal of preventing or limiting damage to the receiving environment. This Plan is also required under Part H of the Licence and the Board's reasons for including this Plan, and requiring revisions and re-submittals, are described above in Section 5.9 of these Reasons for Decision. 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 land use 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 Part B of the Licence and the Board's reasons for including this Plan, and requiring revisions and re-submittals, are described above in Section 5.3 of these Reasons for Decision. 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, defined terms, 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 Prairie Creek Mine Project can be completed by CZN 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 MV2020L2-0003 and Land Use Permit MV2020D0007 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

December 17, 2020

Date

Appendices and Annexes

Water Licence and Land Use Permit Applications	
Preliminary Screener	MVLWB
File Number	MV2020L2-0003 MV2020D0007
Company	Canadian Zinc Corporation
Project	Prairie Creek Mine, NT

Appendix 1: Reclamation Security for Prairie Creek Mine

The Board previously decided on the security deposit for the Prairie Creek Mine in 2013 as indicated in the Reasons for Decision dated July 30, 2013.¹⁵⁸ The Board’s Reasons for Decision dated May 21, 2015 documented the Board’s decision to amend the security condition to require posting the security prior to commencement of activities in order to accommodate CZN’s “abeyance” request.¹⁵⁹ The security estimate uses the RECLAIM model, which is the Board’s preferred closure cost estimation model as indicated in the Board’s *Guidelines for Closure and Reclamation Cost Estimates for Mine*.¹⁶⁰ The RECLAIM model can segregate the security estimates into land or water related cost by assigning a percentage depending on the site-specific conditions. The land related cost becomes the security estimate under the Permit, while the water related cost becomes the security estimate under the Licence. The Board has considered the evidence submitted related to the land and water cost as summarized below.

CZN submitted a RECLAIM estimate with its Applications.¹⁶¹ During the review of the Applications, GNWT indicated that it would provide comments on the security estimate later in the proceeding.¹⁶² On August 20, 2020, GNWT provided a written submission, which included its RECLAIM estimates conducted by Brodie Consulting Ltd. (Brodie).¹⁶³ On September 1, 2020, an Information Request (IR) was directed to CZN requiring a response to GNWT’s RECLAIM estimates.¹⁶⁴ On September 16, 2020, CZN submitted a revised RECLAIM estimate in response to the IR, which indicated that CZN held a discussion with GNWT-ENR on September 8, 2020 to discuss the RECLAIM estimates.¹⁶⁵ On September 17, 2020, the response regarding the security estimate was distributed for review. By October 1, 2020, comments were received from: GNWT-Lands; GNWT-ENR; and Board staff. CZN responded to comments regarding the security estimate on October 8, 2020.¹⁶⁶ On November 18, 2020, GNWT submitted Closing Arguments making clarifications regarding the security estimates.¹⁶⁷ On November 20, 2020, CZN submitted Closing Arguments responding to GNWT’s clarifications regarding security.¹⁶⁸

¹⁵⁸ See Reasons for Decision for Licence MV2008L2-0002 and Permit MV2008D0014 ([hyperlink](#)), dated July 30, 2013.

¹⁵⁹ See Reasons for Decision for Licence MV2008L2-0002 schedule change and Permit MV2008D0014 amendment ([hyperlink](#)), dated May 21, 2015.

¹⁶⁰ 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](#) (November 2013).

¹⁶¹ See Water Licence MV2020L2-00003 Application – Closure Cost Estimate ([hyperlink](#)), submitted to the MVLWB on May 13, 2020.

¹⁶² See Review Comment Summary Table – Application - GNWT ID-6 ([hyperlink](#)), dated June 18, 2020.

¹⁶³ See Written Submissions: GNWT ([hyperlink](#)), submitted to the MVLWB on August 20, 2020.

¹⁶⁴ See Information Request Re Security ([hyperlink](#)), dated September 1, 2020.

¹⁶⁵ See Response to IR Re Security ([hyperlink](#)), dated September 16, 2020.

¹⁶⁶ See Review Comment Summary Table – Responses to Information Request ([hyperlink](#)), dated October 8, 2020.

¹⁶⁷ See Closing Arguments: GNWT-ENR ([hyperlink](#)); submitted to the MVLWB on November 18, 2020.

¹⁶⁸ See CZN – Closing Arguments ([hyperlink](#)), submitted to the MVLWB on November 20, 2020.

1.0 Introduction

The Board reviewed and considered all the evidence on the record regarding security estimates, and the fact that CZN has not proposed any changes to its Project, except for the term of the authorizations.

1.1 Summary of Evidence Submitted to the Board

GNWT noted in its written submission that the following items were considered in GNWT's estimates as shown in Table 1:

- Update of RECLAIM model from Version 6.1 (2013) to Version 7 (2014)
- Inflation of 8.5% from 2014 to 2020 for unit costs using Canadian Consumer Price Index for Northern Canada¹⁶⁹

Table 1: GNWT's Security Estimate in its Written Submission dated August 20, 2020¹⁷⁰

Capital Costs	Component Name	Cost	Land Liability	Water Liability
Open Pit		\$0	\$0	\$0
Underground Mine		\$7,290,985	\$38,862	\$7,252,123
Tailings Facility	Water Storage Pond	\$185,556	\$0	\$19,985
Rock Pile		\$432,242	\$8,245	\$423,997
Buildings and Equipment		\$2,501,408	\$2,493,681	\$7,727
Chemicals and Contaminated Soil Management		\$151,636	\$86,229	\$65,407
Surface and Groundwater Management		\$784,712	-	\$784,712
Interim Care and Maintenance		\$3,366,958	-	\$3,366,958
	Subtotal: Capital Costs	\$14,713,496	\$2,627,018	\$11,920,908
	Percent of Subtotal		18%	81%
Indirect Costs		Cost	Land Liability	Water Liability
Mobilization/Demobilization		\$1,441,520	\$257,376	\$1,167,923
Post-Closure Monitoring and Maintenance		\$1,490,135	\$266,056	\$1,207,311
Engineering	5%	\$735,675	\$131,351	\$596,045
Project Management	5%	\$735,675	\$131,351	\$596,045
Health and Safety Plans/Monitoring & QA/QC	0%	\$0	\$0	\$0
Bonding/Insurance	0%	\$0	\$0	\$0
Contingency	25%	\$3,678,374	\$656,754	\$2,980,227
Market Price Factor Adjustment	0%	\$0	\$0	\$0
	Subtotal: Indirect Costs	\$8,081,378	\$1,442,888	\$6,547,551
Total Costs		\$22,794,874	\$4,069,905	\$18,468,459

¹⁶⁹ See Written Submissions: GNWT ([hyperlink](#)), submitted to the MVLWB on August 20, 2020.

¹⁷⁰ See Written Submissions: GNWT ([hyperlink](#)), submitted to the MVLWB on August 20, 2020.

In CZN’s response to IR, CZN submitted a revised security estimate which considered GNWT’s RECLAIM estimates after their meeting on September 8, 2020 as shown in Table 2 below, and noted the following:

- CZN’s costs for underground mine reflect the Board’s 2013 Reasons for Decision regarding quantities and unit costs
- CZN removed costs related to the winter road as CZN is required to post security under its ASR authorizations (Permit MV2014F0013, Licence MV2014L8-0006, and Licence MV2019L2-0002)¹⁷¹

Table 2: CZN’s Revised Security Estimate in Response to Information Request¹⁷²

Capital Costs	Component Name	Cost	Land Liability	Water Liability
Open Pit		\$0	\$0	\$0
Underground Mine		\$3,814,044	\$0	\$3,814,044
Tailings Facility	Wsp	\$707,635	\$0	\$707,635
Rock Pile	Wrp	\$690,065	\$7,706	\$682,359
Buildings and Equipment	Infrastructure	\$2,325,068	\$2,325,068	\$0
Chemicals and Contaminated Soil Management		\$140,887	\$82,800	\$58,087
Surface and Groundwater Management		\$32,400	-	\$32,400
Interim Care and Maintenance		\$1,228,157	-	\$1,228,157
	Subtotal: Capital Costs	\$8,938,257	\$2,415,574	\$6,522,683
	Percent of Subtotal		27%	73%
Indirect Costs		Cost	Land Liability	Water Liability
Mobilization/Demobilization	All Equipment is on Site	\$529,584	\$143,121	\$386,463
Post-Closure Monitoring and Maintenance		\$1,614,836	\$436,411	\$1,178,425
Post-Closure Pump & Treat Contingency		\$3,786,875	\$1,023,407	\$2,763,467
Engineering	5%	\$446,913	\$120,779	\$326,134
Project Management	5%	\$446,913	\$120,779	\$326,134
Health and Safety Plans/Monitoring & QA/QC	1%	\$89,383	\$24,156	\$65,227
Bonding/Insurance	1%	\$89,383	\$24,156	\$65,227
Contingency	20%	\$1,787,651	\$483,115	\$1,304,537
Market Price Factor Adjustment	0%	\$0	\$0	\$0
	Subtotal: Indirect Costs	\$8,791,537	\$2,375,923	\$6,415,614
Total Costs		\$17,729,794	\$4,791,497	\$12,938,297

¹⁷¹ See Response to IR Re Security ([hyperlink](#)), dated September 16, 2020.

¹⁷² See Response to IR Re Security ([hyperlink](#)), dated September 16, 2020.

During the review of CZN’s revised RECLAIM estimates, GNWT noted that it had no further comments on CZN’s estimates, and that it maintains its recommended RECLAIM estimates in its written submission.¹⁷³ In response, CZN submitted a letter dated October 8, 2020, which included proposed revisions to the closure cost estimate. CZN stated that its proposed estimate increased by 3.9% compared to the Board’s decision in 2013.¹⁷⁴ The proposed timeline and estimate are shown in Table 3 below:

Table 3: CZN’s Proposed Timeline and Security Estimate in its October 8, 2020 Letter

Proposed Timeline	Proposed Closure Cost Estimate
Water Licence	
Within 90 days of the effective date	\$1,620,000
Prior to extracting Waste Rock	\$2,550,000
Within 12 months of extracting Waste Rock	\$2,100,000
Within 24 months of extracting Waste Rock	\$2,100,000
Prior to commencing Milling	\$5,160,000
<i>Total under Water</i>	<i>\$13,530,000</i>
Land Use Permit	
Within 90 days of issuance	\$250,000
Prior to construction of upgrades to the Mill	\$1,800,000
Within 12 months of upgrades to the Mill	\$1,075,000
Within 24 months of upgrades to the Mill	\$1,075,000
<i>Total under Land</i>	<i>\$4,200,000</i>
Total Estimate	\$17,730,000

During the review of the draft conditions, GNWT-ENR commented on CZN’s proposed security phasing and estimate noting that it aligns with the Board’s Reasons for Decision from 2015, and recommended the proposed phasing and security amount be included in the Licence schedule.¹⁷⁵ Similarly, GNWT-Lands submitted a letter during the review of the draft conditions to note that CZN’s proposed security schedule complies with the Board’s 2015 Decision and is acceptable to GNWT-Lands.¹⁷⁶ GNWT-ENR noted that its position is because CZN is only renewing the term with no proposed changes to the term and conditions, and will be submitting an updated mine plan for a longer term Licence. GNWT-ENR noted that if CZN decides to initiate mining under the short term Licence, GNWT-ENR would request the Board to increase the security estimate.

In GNWT’s Closing Arguments dated November 18, 2020, GNWT-ENR clarified that they agree that costs associated with the winter road are covered under the all season road authorizations.¹⁷⁷ GNWT-ENR reiterated that the estimates will need to be updated. GNWT-ENR noted that CZN based its estimates on the Board’s Reasons for Decisions from 2013, but that GNWT-ENR does not fully agree with the decisions regarding costs associated with backfilling mine tailings. Lastly, GNWT-ENR noted that a comprehensive review of the security will be conducted when CZN submits the new and longer-term Applications.

¹⁷³ See Review Comment Summary Table – Responses to Information Request ([hyperlink](#)): GNWT ID-1, dated October 8, 2020.

¹⁷⁴ See Review Comment Summary Table – Responses to Information Request ([hyperlink](#)), dated October 8, 2020.

¹⁷⁵ See Review Comment Summary Table – Draft Permit and Licence ([hyperlink](#)): GNWT-ENR ID-2, dated November 3, 2020

¹⁷⁶ See Review Comment Summary Table – Draft Permit and Licence ([hyperlink](#)), dated November 3, 2020

¹⁷⁷ See Closing Arguments: GNWT-ENR ([hyperlink](#)); submitted to the MVLWB on November 18, 2020.

In CZN's Closing Arguments dated November 20, 2020, CZN expressed appreciation for GNWT's clarifications, and noted that CZN agreed with GNWT regarding the cost removal of the winter road, but not the cost related to backfilling mine tailings.¹⁷⁸ CZN reiterated that its estimate is consistent with the Board's 2013 decision.

2.0 Board Decision

The Board may consider the following items from subsection 32(2) of the MVLUR in setting the amount of security:

- a) The ability of the Applicant or prospective assignee to pay the costs referred to in that subsection;
- b) The past performance of the Applicant or prospective assignee in respect of any other Permit;
- c) The prior posting of security by the Applicant pursuant to other federal legislation in relation to the land-use operation; and
- d) The probability of environmental damage or the significance of any environmental damage.

2.1 Winter and All-Seasons Road

The Board notes that GNWT and CZN both agreed on the removal of cost of the winter road as the security estimate under the ASR authorizations covers the cost of the road. The Board agrees with both GNWT and CZN that the cost of the road is covered under the ASR authorizations, and can be removed from the mining and milling authorizations.

2.2 Tailings Backfill

The Board notes the difference in estimates between GNWT-ENR and CZN on backfilling mine tailings and that GNWT does not fully agree with the Board's decision in 2013, while CZN's estimate aligns with the Board's 2013 Decision. GNWT-ENR also noted that it will provide a comprehensive security review when the longer-term Application is submitted by CZN. The Board has not received any new evidence regarding the backfill of tailing underground, therefore, the Board has decided to be consistent with the 2013 Decision until new evidence is submitted for consideration.

2.3 Conclusion

The Board considered all the evidence presented above and notes that CZN has not proposed any changes to its Project, except for the term of the authorizations. The Board understands that CZN will be submitting a longer-term Application with updated mine plans, and expects that an updated security estimate will be submitted for the Board's consideration at that time. The Board has decided to accept CZN's proposed security estimate and timeline as demonstrated in Table 3. The Board notes the outstanding item regarding backfill of tailings can be revisited in the new longer-term Application.

The financial security conditions in the authorizations require an initial deposit within 90 days of the effective date of the Licence or issuance of the Permit, and also prior to commencing different milestones, with additional deposits phased (as described in the tables above) to match the increasing liability as the Project progresses. In this way, the liability at the site is matched by security deposits as the Project proceeds through each phase of the Project. This is consistent with INAC's *Mine Site Reclamation Policy for the Northwest Territories*.¹⁷⁹ Consequently, the Board is satisfied that the

¹⁷⁸ See CZN – Closing Arguments ([hyperlink](#)), submitted to the MVLWB on November 20, 2020.

¹⁷⁹ See www.mvlwb.com → Resources → Policies and Guidelines: INAC [Mine Site Reclamation Policy for the NWT](#) (January 2007).

requirements it has imposed are sufficient to protect the environment and ensure that the Project is restored. Due to CZN's financial position, past performance, and security provisions in the Licence and Permit, the Board is satisfied that closure of the Project will be financed ahead of any liabilities that will be incurred.