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Staff Report

Applicant: Canadian Zinc Corporation	
Location: All Season Road, Prairie Creek Mine, NT	File Numbers: MV2014F0013, MV2014L8-0006, MV2019L8-0002
Date Prepared: May 31, 2021	Date of Board Meeting: June 10, 2021
Subject: Land Use Permit and Water Licences – 2020 Annual Report	

1. Purpose

The purpose of this Report is to present to the Mackenzie Valley Land and Water Board (MVLWB/the Board) an Annual Permit and Water Licence Report (Annual Report) submitted by Canadian Zinc Corporation (CZN) to fulfill Permit MV2014F0013, Condition 17, Part B, Condition 19 of Water Licence MV2014L8-0006, and Part B, Condition 19 of Water Licence MV2019L8-0002.

2. Background

- November 13, 2019 – Issuance of Licence MV2014L8-0006, Licence MV2019L8-0002, and Permit MV2014F0013;
- March 23, 2021 – Annual Report received;
- **June 10, 2021 – Annual Report presented to the Board for information update;**
- November 12, 2024 – Expiry of Permit MV2014F0013; and
- November 12, 2039 – Expiry of Licence MV2014L8-0006 and MV2019L8-0002.

3. Discussion

Project History

The Prairie Creek Mine has a long history dating back to the 1960s. From 1966 to the mid-eighties, Cadillac Resources did significant exploration work at the site, and developed mine infrastructure, but shut down prior to mining and operating the mill. CZN has owned and operated the site since 1991. Since that time, CZN has held various Permits and Licences for Prairie Creek Mine. The activities authorized at Prairie Creek Mine include construction and maintenance of a temporary winter road followed by an All Season Road that would connect the Liard Highway to Prairie Creek Mine (not yet

constructed); mineral exploration (CZN is currently undertaking mineral exploration); and mining and milling (CZN has not yet started mining and milling).

On April 16, 2014, CZN applied for authorizations to construct, maintain, and operate an All-Season Road from the mine site to the Nahanni Butte access road. The proposed alignment would cross territorial land, federal land administered by Indian Affairs Branch, and Nahanni National Park administered by Parks Canada. The applications were the subject of environmental assessment (EA) EA1415-001. In September 2017, the Mackenzie Valley Review Board issued report EA1415-001 with a recommendation that the development be approved subject to the measures contained therein. On October 9, 2018, the Minister of Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) issued a decision adopting the Review Board's recommendation that the development be approved. Following this, the Board issued Land Use Permit MV2014F0013 (attached), Water Licence MV2014L8-0006 (for non-federal land; attached), and Water Licence MV2019L8-0002 (for federal land; attached) on November 13, 2019 for the construction of the All-Season Road and associated activities. Of note, the portion of land within the Nahanni National Park Boundary is administered by Parks Canada under separate authorizations. To date, CZN has not begun constructing the road, but has indicated their intent to begin winter road construction in the winter of 2021-22.

Description of Annual Report

On March 23, 2021 CZN submitted an Annual Report (attached). Typically Land Use Permits do not require the submission of an Annual Report, however Permit MV2014F0013 for CZN's All Season Road included a condition requiring CZN to submit an Annual Permit Report because of extensive reporting requirements associated with the Permit. As per the Board's Reasons for Decision for the Prairie Creek All Season Road (attached), CZN submitted one Annual Report to meet the requirements of Permit MV2014F0013, Condition 17, Part B, Condition 19 of Water Licence MV2014L8-0006, and Part B, Condition 19 of Water Licence MV2019L8-0002.

Authorization Requirements

The Annual Report is required to fulfill Permit MV2014F0013, Condition 17, Part B, Condition 19 and Schedule 1, Condition 1 of Water Licence MV2014L8-0006, and Part B, Condition 19 and Schedule 1, Condition 1 of Water Licence MV2019L8-0002.

4. Comments

Board staff reviewed the Annual Report and note that the Annual Report conforms with the requirements listed in Permit MV2014F0013, Condition 17, Part B, condition 19 and Schedule 1, Condition 1 of Water Licence MV2014L8-0006, and Part B, condition 19 and Schedule 1, Condition 1 of Water Licence MV2019L8-0002 (Appendix 1, Table 1). As CZN did not start winter road construction activities during 2020, several annual reporting requirements were not applicable.

5. Conclusion

Board staff conclude there are no outstanding issues or concerns with this Annual Report.

6. Recommendation

Board staff recommend the Board **acknowledge the Annual Land Use Permit and Water Licence Report for MV2014F0013, MV2014L8-0006, MV2019L8-0002.**

A draft decision letter is attached.

7. Attachments

- [Permit MV2014F0013](#)
- [Licence MV2014L8-0006 \(non-federal land\)](#)
- [Licence MV2019L8-0002 \(federal land\)](#)
- [2020 Annual Permit and Licence Report](#)
- [Board's 2019 Reasons for Decision for CZN's All Season Road](#)
- Draft Letter from the Board

Respectfully submitted,



Kimberley Murray
Regulatory Specialist

Appendix 1

Table 1: Board staff review of Licence MV2014L8-0006, Licence MV2019L8-0002, and Permit MV2014F0013 Annual Report

Licence MV2014L8- 0006 Schedule 1, Condition 1	Licence 2019L8- 0002 Schedule 1, Condition 1	Permit MV2014F0013, Condition 17	Description	Board staff Review
a)	a)	a)	A brief summary of Project activities;	Adequate. CZN reported there has been no activity under the authorization.
b)	b)	b)	An updated Project schedule;	Adequate. CZN reported that construction of the Phase 1 winter road is planned for the winter of 2021-2022, and commencement of the Phase 2 All Season Road is planned for the fall of 2022. All Season Road completion is planned for the end of 2024.
c)	c)	n/a	A summary of the calibration and status of the meters and devices referred to in Part B, condition 18 of this Licence;	Not applicable.
d)	d)	c)	A summary of engagement activities conducted in accordance with the approved Engagement Plan, referred to in Part B, condition 20 of this Licence;	Adequate. CZN reported that they hold monthly calls with representatives of Nahᓃą Dehé Dene Band (NDDDB) and Łı́ıdlı́ Kúęé First Nation (LKFN) to discuss project progress, along with future plans and issues. The company met with the Band leadership of NDDDB once, and twice with LKFN, in 2020. CZN held business meetings with Acho Dene Koe First Nation (ADKFN) representatives four times in 2020 and hosted a technical workshop and follow-up meeting in November. The NorZinc Regional Committee (NRC) formed in 2019 met three times in 2020. Communities served by the NRC include Fort Simpson, Fort

Licence MV2014L8- 0006 Schedule 1, Condition 1	Licence 2019L8- 0002 Schedule 1, Condition 1	Permit MV2014F0013, Condition 17	Description	Board staff Review
				Liard, Trout Lake, Nahanni Butte, Wrigley, and Jean Marie.
e)	e)	d)	A summary of how Traditional Knowledge influenced decision making;	Adequate. CZN reported that additional fieldwork was undertaken to further studies, including soil investigations, fish, pika, plant, and archaeological surveys. All survey teams included local indigenous representatives to help undertake and guide the work.
f)	f)	e)	A summary of Construction activities conducted in accordance with Part D of this Licence;	Not applicable.
g)	g)	f)	A summary of repairs and maintenance activities conducted in accordance with this Licence/Permit	Not applicable.
h)	h)	g)	A summary of activities conducted in accordance with the approved Waste Management Plan, <i>required in Part F/Part E, condition 4 of this Licence</i> , including:	Not applicable.
h) i.	h) i.	g) i.	A summary of approved updates or changes to the process or facilities required for the management of Waste;	Not applicable.
h) ii.	h) ii.	g) ii.	Monthly and annual quantities, in cubic metres, of all solid Waste discharged, identified by location;	Not applicable.
h) iii.	h) iii.	g) iii.	Monthly and annual quantities, in cubic metres, of all liquid Waste discharged, identified by location;	Not applicable.
h) iv.	h) iv.	g) iv.	Monthly and annual quantities, in cubic metres, of hazardous Waste generated and removed;	Not applicable.
h) v.	h) v.	g) v.	Monthly and annual quantities,	Not applicable.

Licence MV2014L8- 0006 Schedule 1, Condition 1	Licence 2019L8- 0002 Schedule 1, Condition 1	Permit MV2014F0013, Condition 17	Description	Board staff Review
			in cubic metres, of Sewage solids removed from the Sewage Disposal Facilities, identified by disposal location; and	
h) vi.	h) vi.	g) vi.	A map depicting the location of the Sumps	Not applicable.
i)	i)	h)	A summary of activities conducted in accordance with the approved Sediment and Erosion Control Plan, <i>required in Part F/Part E, condition 6 of this Licence</i> , including:	Not applicable.
i) i.	i) i.	h) i.	A summary of approved updates or changes to the process or facilities required for the management of erosion and sedimentation;	Not applicable.
i) ii.	i) ii.	h) ii.	A description of any erosion susceptible areas encountered;	Not applicable.
i) iii.	i) iii.	h) iii.	A summary of activities undertaken to prevent or mitigate erosion;	Not applicable.
i) iv.	i) iv.	h) iv.	A report of the performance of mitigations applied to each area;	Not applicable.
i) v.	i) v.	h) v.	A summary and interpretation of monitoring results, including any Action Level exceedances; and	Not applicable.
i) vi.	i) vi.	h) vi.	A description of actions taken in response to any Action Level exceedances.	Not applicable.
j)	j)	i)	A summary of activities conducted in accordance with the approved Permafrost Management and Monitoring Plan, <i>required in Part F/Part E, condition 8 of this Licence</i> , including:	Not applicable.
j) i.	j) i.	i) i.	A summary and interpretation of any monitoring results, including Action Level	Not applicable.

Licence MV2014L8- 0006 Schedule 1, Condition 1	Licence 2019L8- 0002 Schedule 1, Condition 1	Permit MV2014F0013, Condition 17	Description	Board staff Review
			exceedances; and	
j) ii.	j) ii.	i) ii.	A list of any Action Level exceedances and a description of actions taken in response to Action Level exceedances.	Not applicable.
k)	k)	j)	A summary of activities conducted in accordance with the approved Geochemical Verification Program, <i>required in Part F/Part E, condition 10</i> , including:	Not applicable.
k) i)	k) i)	j) i.	A summary of approved updates or changes to the processes for characterizing and managing Acid Rock Drainage and Metal Leaching material	Not applicable.
k) ii)	k) ii)	j) ii.	A comparison of the annual quantities of each type of Waste Rock generated to the quantities predicted in the approved Geochemical Verification Program;	Not applicable.
k) iii)	k) iii)	j) iii.	A summary and interpretation of results from the geochemical monitoring performed under the approved Geochemical Verification Program;	Not applicable.
k) iv)	k) iv)	j) iv.	A summary and interpretation of results from Seepage monitoring performed under the approved Geochemical Verification Program, including:	Not applicable.
k) iv) a.	k) iv) a.	j) iv. a.	a site map with Seepage locations;	Not applicable.
k) iv) b.	k) iv) b.	j) iv. b.	comparisons to reference locations;	Not applicable.
k) iv) c.	k) iv) c.	j) iv. c.	an analysis of major trends over the year and since Project inception; and	Not applicable.
k) iv) d.	k) iv) d.	j) iv. d.	a summary of recommendations for future	Not applicable.

Licence MV2014L8- 0006 Schedule 1, Condition 1	Licence 2019L8- 0002 Schedule 1, Condition 1	Permit MV2014F0013, Condition 17	Description	Board staff Review
			Seepage monitoring and/or management actions.	
k) v.	k) v.	j) v.	A summary and interpretation of Water quality monitoring results for each of the main source areas and how these compare to predicted values;	Not applicable.
k) vi.	k) vi.	j) vi.	A summary of any exceedances of the Action Levels described in the Geochemical Verification Program; and	Not applicable.
k) vii.	k) vii.	j) vii.	A description of actions taken in response to any Action Level exceedances under the Geochemical Verification Program	Not applicable.
l)	l)	k)	A summary of activities conducted in accordance with the approved Borrow Pit Management Plan, <i>required in Part F/Part E, condition 12</i> , including:	Not applicable.
l) i.	l) i.	k) i.	A summary of borrow sources approved through the Borrow Pit Management Plan;	Not applicable.
l) ii.	l) ii.	k) ii.	A summary and interpretation of any monitoring results including any Action Level exceedances; and	Not applicable.
l) iii.	l) iii.	k) iii.	A list of any Action Level exceedances and a description of actions taken in response to any Action Level exceedances.	Not applicable.
m)	m)	n/a	A summary of activities conducted in accordance with the approved Water Monitoring Plan, required in Part F/Part E, condition 14 of this Licence, including:	Not applicable.
m) i.	m) i.	n/a	A summary of approved updates or changes to the processes for monitoring Water;	Not applicable.

Licence MV2014L8- 0006 Schedule 1, Condition 1	Licence 2019L8- 0002 Schedule 1, Condition 1	Permit MV2014F0013, Condition 17	Description	Board staff Review
m) ii.	m) ii.	n/a	A summary and interpretation of any monitoring results; and	Not applicable.
m) iii.	m) iii.	n/a	A list of any Action Level exceedances and a description of actions taken in response to any Action Level exceedances	Not applicable.
n)	n)	l)	A summary of activities conducted in accordance with the approved Explosives Management Plan, <i>required in Part F/Part E, condition 16 of this Licence</i> , including:	Not applicable.
n) i)	n) i)	l) i.	A summary and interpretation of any monitoring results including any Action Level exceedances; and	Not applicable.
n) ii)	n) ii)	l) ii.	A list of any Action Level exceedances and a description of actions taken in response to any Action Level exceedances.	Not applicable.
n/a	n/a	m)	A summary of activities conducted in accordance with the approved Rare Plant Management Plan, including:	Not applicable.
n/a	n/a	m) i.	A summary and interpretation of any monitoring results including any Action Level exceedances; and	Not applicable.
n/a	n/a	m) ii.	A list of any Action Level exceedances and a description of actions taken in response to Action Level exceedances.	Not applicable.
n/a	n/a	n)	A summary of activities conducted in accordance with the approved Invasive Species Management Plan, including:	Not applicable.
n/a	n/a	n) i.	A summary and interpretation of any monitoring results including any Action Level exceedances; and	Not applicable.
n/a	n/a	n) ii.	A list of any Action Level exceedances and a description of actions taken in response to	Not applicable.

Licence MV2014L8- 0006 Schedule 1, Condition 1	Licence 2019L8- 0002 Schedule 1, Condition 1	Permit MV2014F0013, Condition 17	Description	Board staff Review
			Action Level exceedances.	
o)	o)	o)	A summary of activities conducted in accordance with the approved Spill Contingency Plan, <i>required in Part G/Part F, condition 2 of this Licence</i> , including:	Not applicable.
o) i.	o) i.	o) i.	A list and description for all Unauthorized Discharges, including the date, NWT spill number, volume, location, summary of the circumstances and follow-up actions taken, and status (i.e. open or closed), in accordance with the reporting requirements in Part F, condition 4 of this Licence; and	Not applicable.
o) ii.	o) ii.	o) ii.	A summary of any spill training carried out.	Not applicable.
p)	p)	p)	A summary of any Closure and Reclamation work completed. The Report shall be in accordance with the <i>Mackenzie Valley Land and Water Board and Aboriginal Affairs and Northern Development Canada's Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories</i> .	Not applicable.
n/a	n/a	q)	A summary of activities conducted in accordance with the approved Avalanche Hazard Management Plan, including:	Not applicable.
n/a	n/a	q) i.	Reporting of avalanche paths completed by an Avalanche Professional;	Not applicable.
n/a	n/a	q) ii.	A summary of measures employed to reduce avalanche risk to vehicles and occupants;	Not applicable.

Licence MV2014L8- 0006 Schedule 1, Condition 1	Licence 2019L8- 0002 Schedule 1, Condition 1	Permit MV2014F0013, Condition 17	Description	Board staff Review
n/a	n/a	q) iii.	A summary and interpretation of any monitoring results, including any Action Level exceedances; and	Not applicable.
n/a	n/a	q) iv.	A list of any Action Level exceedances, and a description of actions taken in response to Action Level exceedances.	Not applicable.
q)	q)	n/a	Tabular summaries of all data and information generated under the Surveillance Network Program annexed to this Licence and graphical summaries of parameters in Microsoft Excel™ format.	Not applicable.
n/a	n/a	r)	A summary of activities conducted in accordance with the approved Traffic Control Mitigation and Road Operations and Maintenance Plan, including:	Not applicable.
n/a	n/a	r) i.	A summary and interpretation of any monitoring results including any Action Level exceedances; and	Not applicable.
n/a	n/a	r) ii.	A list of any Action Level exceedances and a description of actions taken in response to Action Level exceedances.	Not applicable.
n/a	n/a	s)	A summary of activities conducted in accordance with the approved Contaminant Loading Management Plan, including:	Not applicable.
n/a	n/a	s) i.	A summary and interpretation of any monitoring results including any Action Level exceedances; and	Not applicable.
n/a	n/a	s) ii.	A list of any Action Level exceedances and a description of actions taken in response to Action Level exceedances.	Not applicable.
r)	r)	t)	A list of any non-compliance(s)	Adequate. CZN discussed

Licence MV2014L8- 0006 Schedule 1, Condition 1	Licence 2019L8- 0002 Schedule 1, Condition 1	Permit MV2014F0013, Condition 17	Description	Board staff Review
			with the conditions of this Licence or any direction from the Board pursuant to the conditions of this Licence/Permit;	management and monitoring plans required under the All Season Road authorizations. CZN indicated that Board decisions were received for 12/13 management plans submitted. A decision had not been made by the Board regarding a Cultural Heritage Protection Plan as further engagement on the Plan had been proposed by CZN. CZN indicated that this engagement is continuing. CZN indicated that several updates plans will require a second public review (including a Geochemical Verification Program, Traffic Control Mitigation and Road Operations and Maintenance Plan, Sediment and Erosion Control Plan, Invasive Species Management Plan, Explosives Management Plan, Water Monitoring Plan, and Closure and Reclamation Plan).
s)	s)	u)	A summary of actions taken to address concerns, non-conformances, or deficiencies in any reports filed by an Inspector;	Not reported by CZN. Board staff have not received information related to non-compliance.
t)	t)	v)	A table detailing all commitments related to water use and deposit of Waste made during the Environmental Assessment, with descriptions of how each commitment is being or has been met;	Adequate. CZN indicated that there is no change since no construction has occurred.
u)	u)	w)	Any other details requested by the Board by November 30 of the year being reported.	Adequate. CZN indicated that no other details were requested by the Board other than those related to management and monitoring

Licence MV2014L8- 0006 Schedule 1, Condition 1	Licence 2019L8- 0002 Schedule 1, Condition 1	Permit MV2014F0013, Condition 17	Description	Board staff Review
				plans.

Notes:

- Text in *italics* indicates that the wording is only included in the requirements for Schedule 1, condition 1 of the Water Licences (MV014L8-0006 and MV2019L8-0002, respectively).
- n/a means that the item is not a requirement of the Licence or Permit.