



Parent of Canadian Zinc Corporation

May 7, 2020

Jamie Chambers
Regional Superintendent, Dehcho
Environment and Natural Resources
Government of the Northwest Territories
9910-105 Avenue, PO Box 240,
Fort Simpson, NT X0E 0N0

Dear Mr. Chambers

Re: Canadian Zinc Corporation - Mackenzie Valley Land and Water Board -Type B Water Licence - MV2019L2-0006 & Water Licence MV2001L2-0003 (expired) – Compliance Requirements

Thank you for your letter of May 4 and for the details outlined in the letter regarding the Prairie Creek Mine (the Mine). For the purpose of this letter “NorZinc” will describe NorZinc (NZC), its wholly-owned subsidiary Canadian Zinc Corporation (CZN), and CZN’s predecessor company San Andreas Resources.

1. Water from Old Mine Workings

We had been verbally advised by ENR that a letter from ENR would be forthcoming, however, we were expecting it to include discussion of responsibilities for current Mine water management (**Old Mine Water**), a subject upon which we have made many overtures to discuss with ENR over the last many months – and I understand over many years. We were somewhat surprised that the letter makes only peripheral mention of this subject and our prior and ongoing overtures.

As discussed later in this letter the requirements outlined for (a) the security amounts and (b) the other items described as non-compliance events, relate almost entirely to costs for, and treatment of, the **Old Mine Water**. The water from the Exploration Decline that was, and is, the reason for the License only requires ‘settling’ in the existing pond, not treatment, to meet Licence effluent criteria.

2. Security Payment, Future Discussions and Bonding

- a. **Security Paymentⁱ** - In the interest of moving this discussion forward, we propose to make the \$140,648.00 payment referenced in item 1(a) of your letter next week upon direction from ENR. May I request that your staff contacts Mr. Peter Portka (CFO NorZinc) to facilitate appropriate arrangements.
- b. **Future Discussions** - We realize ENR is a regulatory body, but we would like to see this payment as the start of meaningful discussions regarding the issues we have been making overtures on for the past years, to no avail, particularly regarding the Old Mine Water.
- c. **Bonding** - Also we would like to have the GNWT reconsider our application made last year to allow bonding as an alternative security - rather than cash or letter of credit – to align GNWT with almost every other Province and Territory in Canada, who allow such bonding.

3. Historic Old Mine Water Liability

As discussed later in this letter, NorZinc has expended many millions of dollars over 14 years since 2006 for a liability that - in accordance with the 1997 Mine Site Surface Lease that NorZinc originally acquired the Mine – was reserved to the NWT. This Lease specifically identifies NZC responsibility as “*The lessee shall be required to undertake such corrective measures as may be specified by the Minister in the event of waste spill on the land, or water or wind erosion of the land, resulting from the lessee’s operations*”. It is silent on any responsibility regarding Old Mine Water.ⁱⁱ

4. Water Quality and 2020 Activities

- a. **Effluent Treatment & Minewater Treatment Contingency Plans** – As ENR mentioned these have been updated and are now in regulatory review. It is our expectation that the adoption of the revised plans will provide for compliant effluent discharge, and that there are suitable contingencies to ensure that
- b. **Timing of Activities for 2020** – We would like to correct one reference we made in our discussions about seasonal start for water treatment. In general we usually see Mine Water flows start to increase in the 2nd week of June rather than mid-May, as the mine water ‘freshet’ is later than the surface water freshet due to a delay in groundwater response and an ice plug that forms in the mine portal.
- c. **Public Health and Travel** – Since NorZinc’s last call with ENR we have held a number of conversations with Protect NWT and internally prepared a detailed plan “**Prairie Creek COVID-19 Status and Logistics Update**” regarding the expected start of site activities. As requested, after internal review, we will provide this document by May 11.
- d. **Safety Conditions & NWT Workers** – NorZinc has significant concerns regarding the staffing for the 2020 water treatment work. The trained camp managers both come from out of the NWT (Saskatchewan and Texas), and both have requested they drive to the charter flight location in NWT or Fort Nelson for safety reasons. For the NWT workers who mainly come from the Dehcho we have noted their concerns regarding mingling with out of NWT workers.

5. Summary

Attached in **Appendix 1** is a schedule of some of the issues as we see them.

In summary we continue to feel that:

- a. NZC is being held to an inappropriate level of responsibility related to the Old Mine Water flows:
 - (1) NZC’s original agreement to treat Mine water that began in 2006 contemplated the mine being in construction by 2011
 - (2) NZC’s continuing treatment of Mine water 100% at its cost for the past 14 years was never contemplated, particularly since mine site exploration has only occurred in total over 2 of the past 14 years.ⁱⁱⁱ
- b. Evidence shows that although untreated Old Mine Water does not meet the effluent criteria set in the Exploration Water License:
 - (1) We believe the results indicate that at no time has the water quality in Prairie Creek been harmful to aquatic life due to site discharge.
 - (2) Mine Water flowed into Prairie Creek for 25 years (1980-2005) untreated, and with no evidence of negative effects on the environment.¹

¹ Also studies have shown that, despite decades of mine water discharge before NorZinc started treatment in 2006, the only effect detected on Prairie Creek downstream is a mild nutrient enrichment (Spencer et al., 2007).

- (3) Based on historic data, the contained Zinc that daily runs down the pristine South Nahanni River at Virginia Falls in the Nahanni National Park Reserve, is 50 times that in the Prairie Creek Old Mine Water.
- c. The ongoing 2019 water quality compliance issues relate entirely to the Old Mine Water and that NZC's financial responsibility should either be shared with the GNWT or waived based on the historic record.
- d. For 2020 with COVID 19 NZC has been working with NWT Public Health over the past weeks to establish the appropriate protocol for site presence to enable 2020 water treatment.
- (1) The situation is not easy, there is some ability to get non-NWT resident workers to site, perhaps as soon as early June 2020, but it is unclear as to whether this can be done with satisfactory safety conditions for workers from our local communities.
- (2) Corporately we are uncomfortable carrying on the limited work at site without meeting our commitments to members from our communities and our commitment to the GNWT to focus on NWT employment.

We would like to discuss these matters with ENR. We should also mention that we are contemplating a possible exploration program at site starting late in the summer, but no commitments are likely on this until well into the summer.

Sincerely,



Don MacDonald, President & CEO
NorZinc Ltd. (formerly Canadian Zinc Corp)

cc.

Shelagh Montgomery
Executive Director
Mackenzie Valley Land and Water Board

Nathen Richea
A/ Assistant Deputy Minister, Environment and Climate Change
Environment and Natural Resources

Brett Elkin
A/ Assistant Deputy Minister, Operations
Environment and Natural Resources

Pam Strand
Deputy Minister
Industry, Tourism and Investment

Appendix 1

1. History of Mine water
 - a. 1980 – 2006 - The original Mine was built in 1980. For 25 years water flowed from the Mine into Prairie Creek without treatment, and with no evidence of negative effects on the environment.
 - b. 1997 - NZC's predecessor acquired the Mine in 1997 on a Care and Maintenance basis with no obligation to treat old Mine water.
 - c. 2006 - 2007 In 2006 NZC wanted to access the underground workings to carry on underground exploration to potentially make the Mine economically viable. In order to get the permits NZC offered to treat the Mine water despite the fact the water from the Exploration Decline only requires 'settling' in the existing pond, not treatment, to meet Licence effluent criteria.
 - d. 2008-2019 NZC carried out no mine-site exploration 2008 to 2014, 2017 to 2019 but each year continued to treat the Mine water, at considerable cost.
2. Water quality
 - a. Since 2006 it has been clear that all the water that needs treatment emanates from the Old Mine workings.
 - b. The water flows from the old Mine working and the Decline have been separated underground but NZC has continued to be required to pay for the Old Mine Water treatment.
 - c. NZC has continued to treat the Old Mine Water since 2007 despite having no contractual obligation so to do and no support from the NWT.
3. Security
 - a. An initial exploration water license was issued in 2003 and extended several times. [The current legislation allows for up to 25 years.]
 - b. The licence was extended ultimately for 16 years to 2019, but rather than a further extension to 2024 (still within the 25 year window) a renewal was required.
 - c. On renewal NZC was required to increase its security from \$70,000 to \$210,648 (3 times the original)
 - d. This security was based almost entirely on the treatment for the Old Mine water.
4. Security timing and amount
 - a. The renewed permit was issued Sept 9, 2019.
 - b. NZC requested a review of the amount of the security but this was denied by the Water Board stating that there was no new evidence. There was no opportunity to argue numbers for responsibilities.
 - c. The renewed permit required posting of the security by Dec 9, 2019.
 - d. During the discussions on the timing, NZC advised that it would request an extension for 9 months (to June 9, 2020) to align with the commencement of site work. There was no verbal dissent to this advice.
 - e. Since then COVID-19 has made the ability to safely mobilize as normal and comply with local requirements very much in jeopardy.
5. Water Non-Compliance
 - a. NZC has taken its best efforts to meet the standards imposed by the Exploration Water Licence.
 - b. There is no scientific evidence we are aware of that exceedances of Licence EQC have had any deleterious effect on the local environment.
 - c. When EQC have been exceeded, these mainly coincide with periods of much higher than normal rain fall, with consequent higher flows in the receiving environment.

Appendix 2- Endnotes

ⁱ On November 27, 2019 CZN wrote to the Water Board to request a review or deferral of the security increases, and reiterated our desire to have discussions with the GNWT regarding responsibilities for water treatment. In late January 2020 we approached ENR informally seeking to initiate these discussions. We were told ENR would 'get back to us'. CZN made further inquiries in March as we had not heard from ENR. On March 19 and April 22, 2020 the Company held conference calls with the Board, ENR and Lands. On both occasions the Company reiterated a desire to open a dialogue with ENR regarding mine water management responsibilities.

While we appreciate the security payment and site water quality are immediate issues that require attention, the matter of responsibilities underlies both and remains unresolved. Therefore, we are respectfully asking that ENR make themselves available to initiate discussions.

In our February 27, 2020 reply to ENR's January 23, 2020 letter regarding non-payment of security, we advised that the Company intended to apply to the Water Board for an extension of the security payment deadline, and that we were completing engagement for that application. We reiterated this position on the March 19 and April 22 conference calls. We have completed the engagement and we had planned to make an application for a six-month extension, which would make payment due by June 9, 2020.

In making the extension request, we had hoped that it would provide sufficient time for the Company to have discussions with ENR to resolve the matter of responsibilities. Unfortunately, that has not occurred, and so we will be making the security payment despite our protests as to the unfairness considering our assessment of responsibilities.

ⁱⁱ When San Andreas (now CZN) signed Surface Lease 95F/10-5-5, it did so with the intent of further exploring the property without incurring significant existing liability. The Company did not assume the responsibility of managing mine water drainage in perpetuity. Therefore, that responsibility remains with the Lessor (formerly INAC and now GNWT) until such time that CZN negotiates a new Surface Lease for operations.

We have sampled the Decline water a number of times, and each time the total zinc concentration was well below 0.4 mg/L. As such, Decline water can be discharged without treatment.

CZN has continued to treat the water emanating from the old mine workings, long after the completion of the Decline undertaking, at great expense to the Company, and although we believe we are not responsible for doing so. The task is no small exercise for a junior company without any income from production. If any significant further expenditure is to be suggested to improve the existing water management system, over and above what we are already planning, and before our proposed transition to operations, then CZN will need to come to some understanding with the GNWT.

ⁱⁱⁱ CZN's original agreement to treat Mine water began in November 2006 with Decline development which with drilling was completed in December 2007. A further period of drilling occurred from December 2014 to July 2015. Therefore, CZN has continued to treat mine water at 100% of the cost for the past 14 years, although exploration only occurred over less than 2 years