



Water Resources Division
Nunavut Regional Office
Iqaluit, NU
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NWB File: 1AR-NAN1419
CIDMS #: 1260263

August 23, 2019

Richard Dwyer
Manager of Licensing, NWB
P.O. Box 119
Gjoa Haven, NU
X0B 1J0

Re: 1AR-NAN1419 – Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) Technical Review for Water License Renewal/Amendment License Process - Nanisivik Mine Property – Canzinc Ltd. - Nyrstar Canada (Holdings) Ltd. (Nyrstar).

Dear Mr. Dwyer,

Thank you for your email on July 16, 2019, concerning the water licence 1AR-NAN1419 renewal/amendment application.

Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) has conducted a technical review of the application and a memorandum is provided for the Nunavut Water Board's (NWB) consideration. CIRNAC Comments have been provided pursuant to the Department's mandated responsibilities under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Crown-Indigenous Relations and Northern Affairs Act*.

Please do not hesitate to contact me by telephone at 867-222-9278 or email at ian.parsons@canada.ca for further comments or any questions.

Sincerely,

Original signed by

Ian Parsons
Regional Coordinator



Technical Review Memorandum

Re: 1AR-NAN1419 – CIRNAC’s Technical Review for Water License Renewal/Amendment License Process - Nanisivik Mine Property – Canzinco Ltd. - Nyrstar Canada (Holdings) Ltd. (Nyrstar).

A. Background

The Nanisivik Mine Property is a past-producing zinc mine located in Canada’s High Arctic approximated 30 km East of Arctic Bay, Nunavut. The mine operated for a period of 26 years from 1976 until 2002.

Since closure, Canzinco Ltd., a wholly owned subsidiary of Breakwater Resources Ltd. has implemented its closure and reclamation plan (approved 2004), including water quality and geotechnical monitoring for the Nanisivik Mine Site.

As of August 26, 2011, Breakwater Resources Ltd. was purchased by Nyrstar Canada (Holdings) Ltd., a wholly-owned subsidiary of Nyrstar NV., thus reclamation activities are still being carried out by Canzinco Ltd. however Canzinco Ltd. is now a wholly owned subsidiary of Nyrstar Canada (Holdings) Ltd.

During the last five years the licensee has continued to carry out its water licence monitoring requirements and has remediated the remaining contaminated soil from past mining operations.

The existing water license (1AR-NAN1419) is valid until December 31, 2019.

B. Results of Review

Following the review of the renewal/amendment water license application CIRNAC has the following technical review comments:

1.) Buildings/Infrastructure and equipment

Comment:

There is an old garage type buildings and equipment remaining from the past mining activities at Nanisivik, as well as several sea cans and the 2 trucks (one fuel tanker and one flat bed) located in the vicinity of the old mine town site, and an old building with some electrical components located at the old Short take-off and landing (STOL) airstrip.



There has been some discussion that the garage type building, associated sea cans and the two trucks would become the property of either the Government of Nunavut or the Hamlet of Arctic Bay.

CIRNAC Recommendation

CIRNAC requests that;

1. Canzinco provide documentation that these buildings and equipment are now the property of either the Government of Nunavut or the Hamlet of Arctic Bay.
2. If no documentation can be provided, the opinion of CIRNAC is that these structures and equipment belong to Canzinco. With this scenario, CIRNAC requests that Canzinco describes what their intention is for the buildings and/or equipment.

2.) Other activity on site

Comment:

CIRNAC would like to point out that there is still quite a bit of activity on or near the former mine site; namely on the roads in and around the former mine site. This activity may lead to spills, erosion of infrastructure, accidents or other related deterioration of closed mine infrastructure. For example a fuel spill/stain was identified during the August 6-9, 2019 site visit by CIRNAC. As this was on surface and fuel could be smelled it is likely a recent spill and not likely to be attributed to Canzinco activities.

Another party in the area has been approved to use East twin lakes for water use if necessary. This party can travel around the mine site. As well it is unknown at this time if water use from East twin lakes will impact the subaqueous tailings that are located in the same water shed.

CIRNAC Recommendation:

CIRNAC recommends that Canzinco document as best they can either through mutual agreements or past and present photos of the activities that are occurring in and around any of the closed mine aspects.

3.) Water Quality/Long-term Monitoring Plan

Comment:

The long term monitoring plan submitted with the water licence renewal application has been reviewed and is reasonable.



4.) Security

Comment:

CIRNAC will be submitting an update closure cost estimate with its final submission for this water licence process before the final hearing.