



NUNAVUT WATER BOARD

WATER LICENCE NO. 1AR-NAN2030

**REASONS FOR DECISION
INCLUDING RECORD OF PROCEEDINGS**



NUNAVUT WATER BOARD

In the Matter of:

Applicant: Canzinc Mines Ltd.

Subject: Application for renewal and amendment of a Type “A” Water Licence No. 1AR-NAN1420

Date: January 9, 2020

Precedence: Where there is any inconsistency or conflict between the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada (Nunavut Agreement)* and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act (NWNSRTA)*, the *Nunavut Agreement* prevails to the extent of the inconsistency or conflict. Where there is any inconsistency or conflict between the *NWNSRTA* and any other act of Parliament, except the *Nunavut Agreement Act*, the *NWNSRTA* prevails to the extent of the inconsistency or conflict.



RECORD OF PROCEEDINGS

Applicant: Canzinco Mines Ltd., previously known as Canzinco Ltd.

Address: Canzinco Mines Ltd.
c/o Nyrstar Tessinerplatz 7
8002 Zurich, Switzerland

Purpose: Application for Renewal and Amendment of Type “A” Water Licence 1AR-NAN1420 to authorize Water use and Waste deposit in support of continued closure and remediation and post-closure monitoring activities at the former Nanisivik Mine Project

Complete Application Received on: June 20, 2019

Application Received from: Canzinco Mines Ltd.

Date of Written Public Hearing: November 27, 2019

Date Board confirmed Public Hearing Record Closed: November 28, 2019



PARTICIPANTS DURING THE BOARD'S REVIEW OF THE APPLICATION

Nunavut Water Board Panel Members (P13 Nanisivik Panel):	Chairman	L. Toomasie
	Member	A. Hanson-Main
	Member	M. Nartok

Nunavut Water Board Staff:	Executive Director	S. Autut
	Director Technical Services	K. Kharatyan
	Director of Board Administration and Communication	B. Kogvik
	Director of Licensing	R. Dwyer
	Technical Advisor	M. A. Shaikh
	Licence Administrator Assistant	K. Carter
	Legal Counsel (Meadows Law)	T. Meadows

Applicant:

Canzinc Mines Ltd.	Director	J. Skoglund
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Interveners:

Crown-Indigenous Relations and Northern Affairs (CIRNA)	Regional Coordinator, Water Resources Division	I. Parsons
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Written Record of Submissions:	Available from the Board's public registry using the following link: ftp://ftp.nwb-oen.ca/registry/1%20INDUSTRIAL/1A/1AR%20-%20Remediation/1AR-NAN2030/2%20ADMIN/4%20HEARINGS/2%20HEARING/
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ABBREVIATIONS

In this decision, the following abbreviations are used;

Short Form	Full Name
CIRNA or CIRNAC	Crown-Indigenous Relations and Northern Affairs Canada (formerly INAC and AANDC)
Canzinco	Canzinco Mines Ltd.
DFO	Department of Fisheries and Oceans Canada
DND	Department of National Defence
ECCC	Environment and Climate Change Canada (formerly Environment Canada)
GN	Government of Nunavut
NIRB	Nunavut Impact Review Board
<i>Nunavut Agreement</i>	<i>Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada</i>
NPC	Nunavut Planning Commission
<i>NuPPAA</i>	<i>Nunavut Planning and Project Assessment Act, S.C. 2013, c. 14, s. 2</i>
<i>NWNSRTA</i>	<i>Nunavut Waters and Nunavut Surface Rights Tribunal Act, S.C. 2002, c. 10</i>
NWB	Nunavut Water Board
PHC	Pre-Hearing Conference
PH	Public Hearing
TM	Technical Meeting



REASONS FOR DECISION

Executive Summary

This decision is in relation to an application before the Nunavut Water Board (NWB or Board), filed by Canzinc Mines Ltd. (Canzinc or Licensee or Applicant), for the amendment and renewal, for a ten-year term, of Type “A” Water Licence 1AR-NAN1420 (the Application). The Application, filed with the NWB on June 20, 2019, seeks authorization for the continuation of an undertaking classified as “Industrial” under the *Nunavut Water Regulations*.¹ The undertaking includes continued post-closure monitoring of water quality and geotechnical stability at the former Nanisivik Mine located on the Borden Peninsula on northern Baffin Island, Nunavut, approximately 33 kilometres by road from the Hamlet of Arctic Bay.

The Nanisivik Mine formerly produced lead and zinc concentrates, and operated from 1976 until 2002. The Final Closure and Reclamation Plan for the mine was approved by the Nunavut Water Board in 2004, and the majority of the site reclamation activities were undertaken between 2004 and 2008. Remaining reclamation works, involving the remediation of petroleum hydrocarbon contaminated soil at the dock site, were finalized in 2017. Since the completion of the work in 2017, on-site activities have been limited to post-closure monitoring of water quality and geotechnical stability. There have been no other uses of water during the current licence period (i.e. since 2014) and active waste deposits have also ceased.

The NWB reviewed and facilitated the review process for the Application that included:

- a completeness check,
- a technical review period,
- a Technical Meeting and Pre-Hearing Conference (TM/PHC) held by way of teleconference on September 13, 2019 and
- a written Public Hearing which concluded on November 27, 2019 when parties confirmed that all submissions with respect to the Application to be considered by the Board had been provided.

Throughout the NWB’s consideration of the Application, several written and oral commenting opportunities were provided to interested persons potentially affected by the project and to formal interveners, including government agencies, landowners or administrators, the Regional Inuit

¹ Under the *Nunavut Waters Regulations*, SOR/2013-69, Schedule 1, “Industrial” is defined as “Manufacturing processes, hydrostatic testing, quarrying and gravel washing, petroleum and gas exploration, the production, processing, refining or storage of petroleum, petroleum products or gas, cooling systems, food processing, tanneries, the smelting or refining of minerals, metal finishing, the restoration of the site of an industrial undertaking and any other industrial activity”.



Association, the Hamlet of Arctic Bay, the local Hunters and Trappers Organization, community members and members of the public.

During the TM/PHC in September, the NWB identified that given the prescribed timelines the Board must follow (requiring the Board to provide at least 60 days' notice in advance of a Public Hearing); the likely timing of a Public Hearing, the typical 30 to 45-day timeline for the Board's decision-making and reporting following the close of the Public Hearing Record and the Minister of Northern Affairs (Minister) timelines (45 to 90-day timeline for decision-making), it was unlikely that the renewal and amendment process would be completed before the existing Licence expired on December 22, 2019. Consequently, the NWB indicated that the Applicant may wish to file a short term renewal application (STR Application) as allowed for under s. 9(1)(b) of the *Nunavut Waters Regulations*, SOR/2013-69², to request a short term renewal of the existing Licence.

The Short Term Renewal (STR) Licence was approved by the Panel and granted on November 15, 2019 on the following conditions:

- Absolutely no changes to the existing Licence (administrative or otherwise);
- The short term renewal would not exceed 180 days from the date on which the existing Licence expires (December 22, 2019 to June 19, 2020) with the expiry of the short term renewal occurring on the earlier of June 19, 2020 or upon the grant of a renewed water licence, if the Board decides and the Minister approves the issuance of a renewed and amended water licence;
- No plans, studies, reports, or designs would be required to be submitted in support of the STR Application as this information has already been provided or will be provided during the Board's processing of the Application; and
- The assumption that even if the NWB grants the short term renewal of the existing Licence, the current Application will continue to be processed by the Board in as timely and efficient a manner as possible.

The STR Licence 1AR-NAN1420 was subsequently approved by the Minister on December 18, 2019.

On the basis of the information provided with the Application, technical review by the NWB and interveners, comments and written submissions filed with the NWB, and information provided

² Section 9(1)(b) establishes that:

For the purposes of section 13.7.3 of the Agreement and subsection 52(1) of the Act, no public hearing is required in respect of an application for... (b) one or several renewals of a type A licence if the total duration of the renewal or renewals does not exceed 180 days.



during the written Public Hearing to the three-member Panel, duly appointed by the NWB to consider the Application, the NWB has decided the following:

- To grant Canzinco's request to renew Water Licence No. 1AR-NAN1420 in accordance with the terms and conditions outlined in these Reasons for Decision (Decision) and in the attached renewed/amended Water Licence No. 1AR-NAN2030; and
- Specific terms and conditions of note in the renewed/amended Water Licence No. 1AR-NAN2030 (the Licence) include the following:
 - As requested by Canzinco, the term of the Licence is 10 years expiring on (January 9, 2030), with the expectation that if a further term is required, Canzinco will apply for renewal of the Licence at least one year before the Licence is set to expire;
 - Canzinco will be required to maintain security in the amount specified under the Licence, in the form required by the *Nunavut Waters Regulations*;
 - Canzinco will be required to update specific management plans as outlined in the Licence; and
 - Canzinco will be required to consider and undertake monitoring in accordance with the following key amendments:

Amendment to water quality monitoring requirements to include the following:

- a. Discontinuation of voluntary water quality monitoring stations ELO and 159-6 TEMP in Schedule C, Table 3 of the Licence;
- b. Key analytical test groups will be NAN-1 and NAN-2 included within the Licence Monitoring Program; and
- c. Reduction in sampling frequency for water quality monitoring to once per year.

Amendment to the geotechnical monitoring requirements to include the following:

- a. Changes in geotechnical monitoring frequency in accordance with Schedule C, Table 1 in the Licence.

In this Decision, the NWB provides a summary of issues that were identified during the review of this Application. These issues highlight the unique roles of regulatory agencies and landowners in ensuring that undertakings, such as the Nanisivik Mine site's post-closure monitoring activities meet or exceed abandonment and reclamation obligations.



SECTION I: FILE BACKGROUND AND REGULATORY HISTORY

Current Application

The Nanisivik Mine is a former lead-zinc mine located on Northern Baffin Island, near Arctic Bay, within the Qikiqtani Region of Nunavut. The Nanisivik Mine, which was the first Canadian mine north of the Arctic Circle, operated from 1976 to 2002. Since 2002, the mine has been undergoing closure and active reclamation; and these activities were completed in 2017. The Application seeks the renewal and amendment of the existing Type “A” Water Licence No: 1AR-NAN1420 to authorize the continued post-closure monitoring of water quality and geotechnical stability of the former “Mining” Undertaking.³

Ownership of the assets associated with the former mine has changed hands several times over the years. The current Licensee, Canzinc Mines Ltd. (Canzinc, Licensee or Applicant) is a wholly owned subsidiary of the Nyrstar Sales & Marketing AG (Nyrstar), a global mining and metals business (with leading positions in zinc and lead mining) and mining and smelting operations throughout Europe, North America and Australia. Nyrstar acquired the Nanisivik Mine in 2011 as a result of the acquisition of the owner of the Nanisivik Mine at the time, Breakwater Resources Ltd.

The Application submitted to the Board on June 20, 2019, is for the renewal and amendment of the Type “A” Water Licence No: 1AR-NAN1419, renewed by the NWB as a short-term (maximum 180 day) renewal under Water Licence No. 1AR-NAN1420 (Existing Licence) on November 15, 2019 that was subsequently approved by the Minister on December 18, 2019.

All documents filed in association with the Application, as well as all documents provided by the Applicant in support of the Application are listed in detail in APPENDIX B - List of Submissions and Correspondence that is attached to these Reasons for Decision, but a summary of the key Application materials provided by Applicant in support of the Application included the following:

June 20, 2019

- Cover Letter: 1AR-NAN1419 – Application for Water Licence Amendment
- 1AR-NAN1419 – Application for Water Licence Amendment:
 - Appendix A: Executive Summary of Water Licence amendment application (English)

³ As defined under the *Nunavut Waters Regulations*, SOR/2013-69, Schedule 1, Item 2, column 2 describes a Mining Undertaking to include “...the restoration of the site of a mine...”.



- Appendix B: Executive summary of Water License amendment application (Inuktitut)
- Appendix C: Resolution Canzinc Mines Ltd.
- Appendix D: Site location map
- Appendix E: Nunavut Planning Commission conformity determinations
- Appendix F: Nunavut Impact Review Board 2002 screening decision
- Appendix G: Nunavut Impact Review Board 2014 screening exemption decision
- Appendix H: Geotechnical monitoring beyond 2019
- Appendix I: Water quality monitoring beyond 2019
- Appendix J: Canzinc Mines Ltd. appointment of officers
- Appendix K: Canzinc Mines Ltd. Certificate
- Appendix L: Compliance assessment 1AR-NAN1419

July 12, 2019

- Email correspondence from Johan Skoglund, Canzinc to Richard Dwyer, NWB in response to CIRNA comments during Completeness Check of the Application

August 23, 2019

- Memo from Canzinc in response to CIRNA's comments received during the technical review of the Application

All documentation associated with the NWB's review of the Application, including the supporting documents referenced above, is available on the NWB's FTP site and can be accessed using the following link:

<ftp://ftp.nwb-oen.ca/registry/1%20INDUSTRIAL/1A/1AR%20-%20Remediation/1AR-NAN2030/>

Scope of the Application

The general scope of the Application includes the following:

- Renewal of the Licence for a ten (10) year period to allow for the continuation of post-closure monitoring activities at the former Nanisivik Mine site;
- Proposed amendments to the water quality monitoring requirements under Schedule I of the Licence to include reductions in monitoring stations, sampling frequency and analytical parameters; and



- Proposed amendments to reduce the current geotechnical monitoring frequency to a single monitoring event per year, and further reductions to subsequent site monitoring over the term of the Licence, as proposed in the Application.

Licensing History

Both the Northwest Territories Water Board (NWTWB) and the Nunavut Water Board (NWB) have issued water licences to the Nanisivik Mine in the past.

Licences Issued by the NWTWB

The first water licence for the Nanisivik Mine, Licence N5L3-0159, was issued by the NWTWB on July 5, 1976 pursuant to the *Northern Inlands Waters Act*, and the licence was subsequently renewed in 1978, 1983, 1988, and 1991.

Licences Issued by the NWB

Reflecting the NWB's jurisdiction for licensing undertakings resulting in the use of water and deposit of waste as established under Article 13 of the *Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada (Nunavut Agreement)* and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, S.C. 2002, c. 10 (NWNSRTA), the NWB has issued five (5) Licences for this Project to date.

Licence NWB1NAN9702

- Issued to Nanisivik Mines Ltd. on July 1, 1997 and expired on June 30, 2002.
- The Licence allowed for the use of 180,000 m³/year of water and deposit of waste for mining and milling activities.
- Amendment No.1 was issued to the licence in December 9, 1999, to allow for changes in operational conditions.
- Amendment No. 2 was issued to the licence in March 20, 2000, to allow for further changes in operational conditions.
- On February 20, 2001, the licence was assigned from Nanisivik Mines Limited to Nanisivik Mine, a division of Canzinc Ltd.

Licence NWB1NAN0208

- Issued to Canzinc Ltd. on October 1, 2002 and expired on May 1, 2008.



- The Licence allowed for the use of up to 180,000 m³/year of water and the deposit of waste in support of an industrial undertaking (closure and reclamation work including post-closure monitoring of the former mine site).

Licence 1AR-NAN0914

- Issued to Canzinc Ltd., a wholly-owned subsidiary of Breakwater Resources Ltd., on April 1, 2009 and expired on March 31, 2014.
- On August 26, 2011 Breakwater Resources was acquired by Nyrstar Sales & Marketing AG.
- On December 27, 2013 Canzinc Ltd. changed their name to Canzinc Mines Ltd.
- The Licence allowed for the use of up to 100 m³/day water and deposit of waste in support of continued remediation and monitoring activities at the former Nanisivik Mine site.

Licence 1AR-NAN1419

- Issued to Canzinc Mines Ltd. on December 23, 2014 and expired on December 22, 2019.
- Licence allowed for the use of up to 100 m³/day water and deposit of waste in support of continued remediation and monitoring activities at the former Nanisivik Mine site.

STR Licence 1AR-NAN1420

- Issued to Canzinc Mines Ltd. on November 15, 2019 and expires on June 19, 2020 or upon the approval of a renewed water licence by Minister. No changes to the Licence No. 1AR-NAN1419 (administrative or otherwise) are included within the STR Licence.

Regulatory and Procedural History of the Application

Pre-Licensing Requirements

On May 24, 2019, the Nunavut Planning Commission (NPC) issued its land use conformity determination associated with the application to renew and amend the existing Type “A” Water Licence No: 1AR-NAN1419 for post-closure monitoring of water quality and geotechnical stability at the former Nanisivik Mine.⁴ The NPC determined that because the Application

⁴ G. Djalogue, Nunavut Planning Commission, Letter to R. Dwyer, NWB, N. Lear, NIRB and J. Skoglund, Canzinc Re: NPC File #149145, [Former Nanisivik Mine], May 24, 2019.



involves components and activities that were previously screened by the Nunavut Impact Review Board (NIRB) and does not constitute a significant modification, the Application did not require further conformity review and impact assessment under Articles 11 and 12 of the *Nunavut Agreement* and the provisions of the *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14, s. 2 (NuPPAA).

On this basis, the NWB has concluded that the conformity and environmental assessment requirements for the Application as required under ss. 38 and 39 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, S.C. 2002, c. 10 (NWNSRTA) have been met and the Application could be processed by the NWB.

Procedural History of the Application

The following includes a summary of the procedural history for the Application that is before the Board to renew and amend the Existing Licence:

June 20, 2019

The NWB received an application from Canzinco for the renewal and amendment of Licence No: 1AR-NAN1419.

The NWB acknowledged receipt of the application package and requested that the Applicant provide confirmation that the application fee and water use fee had been provided.

June 25, 2019

Following an internal review of documents, NWB distributed correspondence requesting that parties conduct their completeness check and initial technical assessment of information contained in the application, with the deadline for submission set for July 10th, 2019. The NWB confirmed receipt of the application fee and water use fee.

July 10-12, 2019

The NWB received comments on completeness from Crown-Indigenous Relations and Northern Affairs (CIRNA).

The NWB issued correspondence requesting that the Applicant respond to Interveners' submissions on completeness by July 15, 2019.

The Licensee provided its response to Interveners' submissions on completeness and initial technical assessment.

July 26, 2019

The NWB distributed the Application publicly for a twenty-one day (21) technical review period with the deadline for submission set for August 16, 2019.



August 16, 2019	Technical comment submissions were received from the following intervening parties: CIRNA, Environment and Climate Change (ECCC) and Fisheries and Oceans Canada (DFO).
August 22-23, 2019	<p>The NWB inquired with the Department of National Defence (DND), Defence Construction Canada regarding any comments/concerns relating to the Application, as DND had previously intervened in the NWB's processing of the renewal of the existing Licence in 2014.</p> <p>The DND confirmed that they had no comments/concerns regarding this Application and would not be intervening in the NWB's processing of the Application.</p>
August 29, 2019	The NWB distributed correspondence advising parties that the Board had directed the staff to hold a Technical Meeting/Pre-Hearing Conference (TM/PHC) by teleconference for the Application in the week of September 9, 2019 (tentatively scheduled for September 13, 2019) and providing a draft TM/PHC Agenda for review and comment. The correspondence also requested that interested persons confirm their intention to participate in the TM/PHC, provide copies of their presentations, and comment on the draft agenda for the upcoming TM/PHC by September 4, 2019.
September 4, 2019	The NWB received copies of the presentation materials for the TM/PHC from the Applicant and CIRNA. No comments requesting amendments to the draft TM/PHC Agenda were received.
September 6, 2019	The NWB distributed correspondence that included details and the final Agenda for the upcoming TM/PHC scheduled for September 12-13, 2019.
September 13, 2019	The NWB hosted the teleconference TM/PHC, with representatives from the Applicant and CIRNA in attendance.



September 27, 2019

The NWB's decision-making Nanisivik P13 Panel (Panel) authorized the release of the PHC Decision Report and issued Notice of the Public Hearing (to be conducted in writing).

The PHC Decision Report also advised that the Applicant should apply for a Short-Term Renewal (STR) of the Licence to provide enough time to process the full renewal Application before the expiry date of the Licence in December, 2019.

October 10-11, 2019

The NWB received the STR Application and commenced a 3 week Technical Review period.

November 7, 2019

The NWB Panel approved the grant of the STR Application. The Short-Term Renewal extends the expiry of the Existing Licence up to 180 days of issuance (with expiry occurring on the earlier of either June 19, 2020, or upon the grant of a renewed water licence).

November 28, 2019

The NWB issued notice that the Public Hearing Record for the Application was closed and that the Application had been remitted to the Panel for decision-making.

All information pertaining to the Application, including the supporting documents is available on the NWB's FTP site and can be accessed from the links provided above.

NWB Timeline for Processing the Applications

As set out under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, S.C. 2002, c. 10 (NWNSRTA), s. 55.2, the NWB is required to process applications in relation to Type "A" Water Licences within 9 months from the receipt of a complete application. As set out in the key procedural steps outlined above, Canzinco submitted the Application on June 20, 2019 and following the NWB's review of the Application and Public Notice of the Application as required under the NWNSRTA was issued on June 25, 2019. Having concluded the NWB's consideration of the Application and issuance of these Reasons for Decision within 7 months of the Board's publishing Notice of Application, the NWB has concluded that the NWB's decision-making has been completed and provided to the Minister of Northern Affairs (the Minister) well within the 9-month timeline for processing the Applications required under s. 55.2 of the NWNSRTA.



SECTION II: SUMMARY OF TECHNICAL REVIEW COMMENTS AND FINAL PUBLIC HEARING SUBMISSIONS OF THE PARTIES

Technical Review

Technical review comments specific to the Application were submitted to the Board on or before August 16, 2019. Comments were received from Crown-Indigenous Relations and Northern Affairs (CIRNA), Environment and Climate Change Canada (ECCC) and Department of Fisheries and Oceans (DFO).

Crown Indigenous Relations and Northern Affairs (CIRNA) Comments

Crown-Indigenous Relations and Northern Affairs Canada's (CIRNA)⁵ participation in water licensing processes in Nunavut is informed by their mandate under the following Acts and associated regulations: *Department of Crown-Indigenous Relations and Northern Affairs Act*,⁶ *Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*, *Nunavut Waters and Nunavut Surface Rights Tribunal Act*,⁷ *Territorial Lands Act*,⁸ and the *Arctic Waters Pollution Prevention Act*.⁹

The technical review comments from CIRNA included the following:

1. CIRNA requested that Canzinc provide documentation confirming that the buildings and equipment 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, are now the property of either the Government of Nunavut or the Hamlet of Arctic Bay.
2. If no documentation can be provided regarding the ownership of this infrastructure, CIRNA expressed the view that these structures and equipment belong to Canzinc. Accordingly, CIRNA requested that Canzinc should describe their intentions with respect to the disposition of these buildings and/or equipment.
3. CIRNA commented that there still seems to be quite a bit of activity on or near the former mine site; namely on the roads in and around the former mine site. CIRNA noted that this activity may lead to spills, erosion of infrastructure, accidents or other related deterioration of closed mine infrastructure.

⁵ Previously known as Indigenous and Northern Affairs Canada (INAC).

⁶ S.C. 2019, c. 29, s. 337..

⁷ S.C. 2002, c. 10.

⁸ R.S.C. 1985, c. T-7.

⁹ R.S.C. 1985, c. A-12.



4. CIRNA recommended 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.
5. CIRNA found the Long-Term Monitoring Plan being put forward by Canzinco to be reasonable.
6. CIRNA indicated they will be submitting an updated closure cost estimate with CIRNA's final submission for this water licensing process. As, the site visit and the due date for the technical comments were too close together to submit a closure cost estimate at this time.

Department of Fisheries and Oceans Canada (DFO) Comments

The basis for the involvement of Fisheries and Oceans Canada (DFO-FPP or DFO) in the water licensing process is DFO's responsibilities for the administration of the *Fisheries Act*,¹⁰ and some aspects of the *Species at Risk Act*.¹¹ Under the *Fisheries Act*, DFO is responsible for the management, protection and conservation of fish (which include marine mammals as defined by the *Fisheries Act*) and their habitats to maintain the sustainability and ongoing productivity of commercial, recreational and Aboriginal fisheries. The Minister of Fisheries, Oceans and the Canadian Coast Guard is one of the competent ministers under the *Species at Risk Act*.

The Fisheries Protection Program (FPP or The Program) of Fisheries and Oceans Canada (DFO-FPP or DFO) is responsible on behalf of the Department for regulatory review of proposed activities occurring in or near Canadian fisheries waters.

The technical review comments from DFO consisted of the following:

1. DFO indicated that, if plans are implemented in the manner and during the timeframe described in the Application, the undertaking and activities would not result in serious harm to fish nor would the activities result in prohibited effects on listed aquatic species at risk.
2. On this basis, DFO concluded that an authorization under the *Fisheries Act* or a permit under the *Species at Risk Act* would not be required to authorize the activities.

After submitting these written technical review comments, DFO did not participate further in the NWB's consideration of the Application and chose not to participate in the TM/PHC.

Environment and Climate Change Canada (ECCC) Comments

¹⁰ R.S.C. 1985, c. F-14.

¹¹ S.C. 2002, c. 49.



ECCC provided comments reflective of their roles and obligations under the *Canadian Environmental Protection Act, 1999*,¹² the pollution prevention provisions of the *Fisheries Act*,¹³ the *Migratory Birds Convention Act, 1994*¹⁴ and the *Species at Risk Act*.¹⁵

The technical review comments received from ECCC included the following:

1. ECCC did not object to the proposed reduction in sampling stations and parameters, but with respect to reducing frequency, requested clarification from the Application regarding the timing of sampling each year (e.g. providing the rationale for the selected month/timing) and the sampling frequency after 2025.
2. ECCC supported the recommendations set out in the Applicant's 2017 and 2018 Water Quality Monitoring Reports, being:
 - a. Reduction of sampling frequency from 3 times a year to once per year from 2020 to 2025;
 - b. Discontinuation of sampling at stations ELO and 159-6 Temp; and
 - c. Discontinuation of the NAN-4 ICP analytical scan for trace metals.

ECCC was satisfied with the responses provided by the Applicant during the information request process and chose not to participate in the TM/PHC.

Canzinco's responses to Interveners' Comments

1) Response to CIRNA's comments

- The buildings and infrastructure referred to in the comment are not the responsibility of Canzinco. They provided ownership details of the building at STOL airstrip, the garage and the sea cans and trucks.
- The increased activity near the former mine site can be attributed to other operators in the area who have been approved to use East Twin Lakes for water.
- Canzinco stated that they do not have the capacity to supervise the activities of other water licence holders to ensure they do not cause pollution or impacts to land and water.
- Finally Canzinco said they look forward to receiving the updated closure cost estimate from CIRNAC.

2) Response to DFO's comments was not required.

¹² S.C. 1999, c. 33.

¹³ R.S.C. 1985, c. F-14.

¹⁴ S.C. 1994, c. 22.

¹⁵ S.C. 2002, c. 49.



3) Response to ECCC's comments

- The proposed monitoring schedule for the period 2020-2029 assumes that the data collected continues to demonstrate stable conditions consistent with those recorded during the post-closure monitoring period to date (i.e. since 2005).
- The proposed timing for the annual monitoring of water quality and geotechnical conditions is August.
- The reason for geotechnical monitoring in August is that this timing allows for measurement of the maximum active layer thaw depth which is typically observed in mid to late August and which is one of the most important parameters for assessing the performance of the thermal covers.
- The reason for water sampling in August is that it provides the best assurance of successful sampling and high-quality results, without the introduction of natural variability associated with the freshet or the risk of early freeze-up in September.

Technical Meeting and Pre-Hearing Conference

The Technical Meeting (TM) for the Application was held by teleconference on September 13, 2019. During the TM, the following key issues were discussed:

- The specific amendments to the geotechnical and water quality monitoring requirements requested by the Applicant;
- Surface water accumulation above the spillway in the dry covered tailings area;
- Ownership of various infrastructure and equipment that remains on-site; and
- Reclamation security cost assessment.

The parties discussed the revised post-closure monitoring requirements and the Applicant identified the specific reductions to monitoring frequency, parameters and locations and the associated amendments to conditions contained in the existing Licence. The requested amendments included:

- Changes to geotechnical monitoring requirements; and
- Changes to water quality monitoring requirements.

There were no objections to the amendments to the monitoring requirements requested by the Applicant in the Application.

At the TM, there was a general agreement concerning the need to update the costs for final closure of the mine site. CIRNA agreed to work with the Applicant to complete an updated reclamation



security cost assessment to reflect the completion of remediation activities during the term of the existing licence.

The Pre-Hearing Conference (PHC) portion of the Agenda proceeded on the afternoon of September 13, 2019 by teleconference. On September 20, 2019, the NWB released the PHC Decision Report¹⁶ which detailed the timelines for the final written submissions of intervening parties and Canzinco. No submissions were received in advance of the Public Hearing. The notice for a written Public Hearing was given on September 27, 2019. All further and final written submissions to be provided by Interveners or members of the public were to be filed with the Board on or before October 29, 2019. On November 27, 2019, the Board provided notice of closure of the Public Hearing record.

All listed submissions, correspondence and transcripts associated with the Application and the Public Hearing have been placed on the NWB's public registry and are available from the NWB's FTP site at the following link:

ftp://ftp.nwb-oen.ca/registry/1%20INDUSTRIAL/1A/1AR%20-%20Remediation/1AR-NAN2030/1%20APPLICATION/2019%20Amend_Renewal/

Final Public Hearing Submissions

Crown-Indigenous Relations and Northern Affairs (CIRNA)

Throughout the review process, CIRNA identified some concerns with respect to the Application, and while many of them have been addressed during the review process, CIRNA in its final submission and presentation made during the Public Hearing generally highlighted their concern related to financial proposed by Canzinco.

An irrevocable letter of credit in the amount of up to \$2,000,000 is posted by Canzinco under the Existing Licence as security for reclamation activities associated with the project. As part of the renewal-amendment process, Canzinco provided an updated financial security assessment that is \$800,000; however, CIRNA requested that the financial security for the project be set to \$1,000,000 to include additional contingency, "to cover potential maintenance and remediation work, including use of heavy equipment that may be required to the West Twin Dike Spillway structure or any other physical structure of the former Nanisivik Mine during the 10-year term of the Amended Licence No. 1AR-NAN1419."

¹⁶ Type "A" Water Licence No: 1AR-NAN1419: Pre- Hearing Conference Decision Regarding an Application for Renewal and Amendment issued by the NWB on September 20, 2019.



SECTION III: SUBMISSIONS BY OTHER INTERVENING PARTIES OR MEMBERS OF THE PUBLIC

Throughout the Board's review of the Application there were no written submissions provided to the NWB by any other intervening party or members of the public.

SECTION IV: JURISDICTION OF THE NWB

The NWB has jurisdiction over this Application pursuant to Division 2 of the NWNSRTA.¹⁷ Relevant sections in that Division allow the NWB to issue a licence,¹⁸ amend a licence,¹⁹ or in certain circumstances, cancel a licence.²⁰ In deciding to issue a licence or engage in any other statutory function, the NWB must follow the objects of the governing legislation, which are:

... to provide for the conservation and utilization of waters in Nunavut, except in a national park, in a manner that will provide the optimum benefit from those waters for the residents of Nunavut in particular and Canadians in general.²¹

In setting the terms and conditions of a licence, the NWB is guided by these objects and the NWB's statutory duty to make *all* reasonable efforts to minimize *any* adverse effects on aquatic ecosystems. Reading several of the Articles of the *Nunavut Agreement* together,²² the NWB relies on the broad definition of "ecosystemic" found in Article 12, Section 12.1.1 of the *Nunavut Agreement*, requiring not only the Nunavut Impact Review Board, but also the NWB, to ensure that all components of the ecosystem, such as fish and fish habitat, are protected within the parameters of s. 71 of the *NWNSRTA*.

As with all applications considered by the NWB, the burden of proof rests with the Applicant to demonstrate that a request for a renewed and amended water licence should be granted. In addition, the NWB Rules of Practice state: "any party offering evidence before the NWB shall have the burden of introducing sufficient and appropriate evidence to support its position."²³ Where intervening parties, community representatives and the public present no evidence

¹⁷ Sections 42-81 of the NWNSRTA.

¹⁸ See ss. 42, 48, 55, 56, and 70 of the NWNSRTA.

¹⁹ See s. 43(1)(b) of the NWNSRTA.

²⁰ See s. 43(1)(c) of the NWNSRTA.

²¹ See s. 35 of the NWNSRTA.

²² This approach is consistent with the direction provided in Article 2, section 2.9.1 of the Nunavut Agreement.

²³ Section 23.1 of the Nunavut Water Board "Rules of Practice and Procedure for Public Hearing" (May 11, 2005).



supporting or rejecting the Applicant's evidence, the NWB will base its decision on its own assessment of the Applicant's request.

SECTION V: REQUIREMENTS OF THE NWNSRTA, THE NUNAVUT AGREEMENT AND NUPPAA

Objects of the NWB and its Relationship to other Bodies

As established under the *Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada* (the *Nunavut Agreement*) and Part 3 of the *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14, s. 2 (*NuPPAA*), prior to the NWB's consideration of the Application, the Applicant must meet the pre-licensing requirements of the Nunavut Planning Commission (land use planning) and the Nunavut Impact Review Board (NIRB) (impact assessment).

Land Use Planning

As noted in the discussion of the regulatory history, on May 24, 2019, the Nunavut Planning Commission (NPC) issued its land use conformity determination²⁴ associated with the Application for the renewal and amendment of Type "A" Water Licence No: 1AR-NAN1419 for post-closure monitoring of water quality and geotechnical stability at the former Nanisivik Mine. The NPC stated that

The activities associated with this proposal were previously reviewed by NPC, and a conformity determination was issued on January 8, 2002, on June 19, 2008 and on May 2, 2014, which still applies. In addition, the activities were previously screened by the Nunavut Impact Review Board (NIRB FILE NO.: 02MC117). This project proposal is exempt from the Nunavut Planning and Project Assessment Act (NUPPAA) under section 235 of that Act. The above noted project proposal is exempt from screening by the NIRB under section 12.4.3 of the Nunavut Agreement as amended because it is for a component or activity that was part of the original proposal and its inclusion is not a significant modification of the project.²⁵

On the basis of the NPC's land use plan conformity assessment of the Application and the NIRB's screening of the project proposal, the NWB has concluded that the conformity and environmental

²⁴ G. Djalogue, Nunavut Planning Commission, Letter to R. Dwyer, NWB, N. Lear, NIRB and J. Skoglund, Canzinc Re: NPC File #149145, [Former Nanisivik Mine], May 24, 2019.

²⁵ G. Djalogue, Nunavut Planning Commission, Letter to R. Dwyer, NWB, N. Lear, NIRB and J. Skoglund, Canzinc Re: NPC File #149145, [Former Nanisivik Mine], May 24, 2019 at pp. 1-2.



assessment requirements for the Application under ss. 38 and 39 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, S.C. 2002, c. 10 (*NWNSRTA*) have been met and the Application can now be processed by the NWB without undergoing additional impact assessment by the NIRB.

Inuit Water Rights

The Nanisivik Mine site is located wholly on Crown lands, and as such, there are no requirements that the Applicant enter into water user compensation agreements with designated Inuit organizations pursuant to s. 63(1) of the *NWNSRTA*.

SECTION VI: DECISION TO ISSUE

Based on the Board's review of the Application, technical comments and final written submissions filed with the Board prior to the closing of the Public Hearing Record for this Application, and for reasons elaborated further below, the NWB has decided to issue a renewed and amended Water Licence to replace the current Water Licence No. 1AR-NAN1420 subject to the terms and conditions as described further in this Decision.²⁶ The renewed and amended Water Licence No: 1AR-NAN2030 contains terms and conditions necessary to protect the environment, conserve the water resources, and provide appropriate safeguards in respect of Canzinc's use of waters and deposit of waste.

Conditions for Issuance of a Licence

Section 57 of the *NWNSRTA* provides several key legislative requirements that must be satisfied before the NWB may issue a licence:

The Board may not issue a licence unless the applicant satisfies the Board that

- (a) any waste produced by the appurtenant undertaking will be treated and disposed of in a manner that is appropriate for the maintenance of the water quality standards and effluent standards that are prescribed by the regulations or, in the absence of such regulations, that the Board considers acceptable; and
- (b) the financial responsibility of the applicant, taking into account the applicant's past performance, is adequate for
 - (i) the completion of the appurtenant undertaking,

²⁶ The licence will be issued under separate cover as 1AR-NAN2030 and does not come into force until approved by the Minister of Northern Affairs under s. 56 of the *NWNSRTA*.



- (ii) such measures as may be required in mitigation of any adverse impact, and
- (iii) the satisfactory maintenance and restoration of the site in the event of any future closing or abandonment of that undertaking.

Financial Responsibility of the Applicant

As outlined under s. 57(b) of the *NWNSRTA*, the NWB considers three aspects of financial responsibility:

- The financial ability of the Applicant to complete the appurtenant undertaking;
- The ability of the Applicant to undertake measures to adequately monitor for impacts and implement measures to mitigate any impacts; and
- The Applicant's ability to maintain and restore the site during care and maintenance, closure and abandonment.

Section 57 also makes it clear that the NWB's assessment of Canzinc's financial responsibility is a contextual analysis that considers not only the remediation and monitoring activities which are the subject of the Licence, but also the Applicant's past performance under the Existing Licence.

Under the Existing Licence, Canzinc had furnished financial security in the amount of \$2,000,000 for potential closure and reclamation liabilities. In the Application, the Applicant indicated that the financial security for the undertaking should be reduced to \$800,000 to reflect that no active reclamation remains to be conducted under the amended and renewed Licence. Canzinc's \$800,000 liability estimate accounts for the costs involved in implementing the post-closure monitoring programs (\$600,000) included in the Application. It also includes a contingency (\$200,000) for any unplanned minor maintenance works that may be required. The estimate provided by Canzinc is based on actual costs incurred in the implementation of the post-closure monitoring programs to date.

CIRNA, in the final written submission submitted as part of the written Public Hearing, indicated that the Department was in agreement with the Applicant with respect to \$600,000 being an appropriate amount for post-closure monitoring. However, CIRNA considered the allotment of \$200,000 for contingency as insufficient and recommended doubling the contingency amount to \$400,000, stating as follows:

CIRNAC recommends that contingency be increased to \$400,000 to cover potential maintenance and remediation work, including use of heavy equipment that may be required to the West Twin Dike Spillway structure or any other physical structure of the former Nanisivik Mine during the 10-year term



of the Amended Licence No. 1AR-NAN2030. CIRNA recommended a financial security of \$1,000,000.²⁷

Canzinco did not object to CIRNA's recommendation and did not file submissions in response to CIRNA's suggested addition to the contingency amount. The NWB considers CIRNA's requested contingency and the rationale for the contingency provided by CIRNA to be reasonable. The Board has amended the security required to be held under the renewed and amended Licence accordingly, to reflect the additional contingency of \$400,000 combined with \$600,000 for the post-closure monitoring program for a total security amount of \$1,000,000 to be held under the Licence.

Compensation of Existing or Other Users

The *NWNSRTA* requires that the NWB must be satisfied that compensation of existing or other users has been or will be paid.²⁸ The Notice of the Application included an invitation to parties whose water rights could be affected by the licensed undertaking to advise the NWB within a prescribed timeline regarding such issues, and the NWB confirms that no representations regarding compensation were made to the NWB during the comment period.²⁹

Issuance of a Licence

As stated above, and pursuant to s. 42(1) of the *NWNSRTA*, the NWB has decided to issue Water Licence No: 1AR-NAN2030, subject to the terms and conditions set out in this Decision and the associated Licence. In issuing the Licence, the NWB is satisfied that the Application contained the required information and was in the proper form having regard to the requirements of the *NWNSRTA*³⁰ and associated Regulations.³¹ The Applicant had requested a Licence term of 10 years, expiring in 2029, however, the Board has decided that the expiry of the Licence could be set at 2030. This extra year will give the Licensee enough time to submit their 2029 monitoring results and will enable them to make an informed decision about potential future monitoring requirements.

²⁷ Submission to Richard Dwyer, Manager of Licensing dated November 01, 2019 RE: 1AR-NAN1419 – 1AR-NAN1419 – Crown-Indigenous Relations and Northern Affairs Canada Updated Security Estimate for Water Licence Renewal/Amendment Process - Nanisivik Mine Property – Canzinco Ltd. - Nyrstar Canada (Holdings) Ltd., by Ian Parsons, CIRNA at p. 3.

²⁸ See ss. 58-60 of the *NWNSRTA*.

²⁹ Notice of the Application in accordance with s. 55 of the *NWNSRTA* was issued by the Board on June 25, 2019.

³⁰ See s. 48 of the *NWNSRTA*

³¹ *Nunavut Waters Regulations*, SOR/2013-69, April 18, 2013.



Assumptions

When faced with choices regarding monitoring requirements such as standards or parameters to be imposed under the Licence, the NWB has opted to maintain stringent monitoring requirements in an effort to ensure that Canzinco meets its on-going environmental protection obligations.

Applications in Relation to the Licences

Overall, the NWB is satisfied that the requirements of s. 48 of the *NWNSRTA* have been met. Canzinco filed an Application which complied with the NWB's Rules, accompanied by the fees required by the *Regulations* which included the application fee and water use fees. In addition, Canzinco has also provided the necessary information to evaluate the qualitative and quantitative effect of the licensed undertaking.

Application to Amend or Application for Future Modifications

In relation to future applications to amend or modify the post-closure remediation and monitoring activities, the NWB reminds Canzinco that it must comply with all requirements of the *Nunavut Agreement*³² and *NWNSRTA*³³ where applicable.

Assignment of a Licence

In future, should Canzinco wish to assign the Licence, it should be aware that a water licence is only assignable if the requirements of s. 44 of the *NWNSRTA* have been met.

This section states:

A sale or other disposition by a licensee of any right, title or interest in an appurtenant undertaking constitutes, subject to the authorization of the Board, an assignment of the licence to the person to whom the sale or other disposition is made.

All necessary forms for filing an application for assignment can be obtained from the NWB Licensing Department.

³² See Article 12, Clause 12.4.3 (b) of the *Nunavut Agreement*.

³³ See s. 43 of the *NWNSRTA*.



Cancellation or Expiry of the Licence

The NWB notes that s. 46 of the *NWNSRTA* states: “[t]he expiry or cancellation of a licence does not relieve the holder from any obligations imposed by the licence.”

In addition, the NWB advises Canzinco that, based on the NWB’s authority under s. 43(1)(c)(iii) of the *NWNSRTA*, the NWB may, on application by a licensee, or on its own motion, cancel a licence when the NWB considers the cancellation to be in the public interest. For the NWB to consider cancellation of a licence, the NWB requires evidence from the licensee and CIRNA’s Inspector establishing that an undertaking has been abandoned, fully reclaimed and there are no outstanding obligations under the licence.

Term of Licence

Section 45 of the *NWNSRTA* provides that the term of a licence or any renewal shall not exceed twenty-five (25) years.

In the current Application, Canzinco has requested a term of ten years to allow for continued post-closure monitoring activities. In terms of duration of the licence required at this stage, the NWB is satisfied that the term requested by Canzinco provides opportunities for the NWB and other stakeholders to holistically review the progress of continued post-closure monitoring activities in advance of any decision to consider the appropriate term for a renewal licence in the future. The NWB in deciding the suitability of the term of the licence also took into consideration interveners’ comments, the nature of the undertaking, and Licensee’s compliance history.

In terms of the type of licence that may be required for the project in the future, it should be noted that the NWB licenses “undertakings” and not individual water use or waste deposit activities; therefore, once the NWB has issued a Type “A” Water Licence governing a mining undertaking, until that appurtenant undertaking has been “abandoned”, the site has been “reclaimed” and the obligations in the water licence have been fully satisfied, a Type “A” Water Licence continues to be required. If any activities relating to closure, reclamation and monitoring remain, such as occasionally requiring discharge of water exceeding established criteria, maintenance of water control structures, or the like, the NWB would generally not view the site as truly reclaimed and the activities would still require authorization under an active Type “A” Water Licence.



SECTION VII: WATER LICENCE No. 1AR-NAN2030 TERMS AND CONDITIONS

The renewed and amended Licence does not take effect until the Minister of Northern Affairs approves the issuance of the Licence, or the Minister's approval is deemed to have been given pursuant to s. 56 of the *NWNSRTA*.³⁴ As indicated in Section VI, the Panel has decided to issue a renewed and amended Type "A" Water Licence No: 1AR-NAN2030, subject to the conditions contained in the attached Licence. To provide context and clarity, the NWB has provided the discussion and comments about specific terms and conditions that follow. The NWB has not, however, provided specific comments for those licence terms and conditions that are clear in their wording and intent on the face of the Licence.

PART A SCOPE, DEFINITIONS AND ENFORCEMENT

Scope

The scope of activities included in this Licence authorizes the Licensee to undertake continued post-closure monitoring, maintenance and related activities at the site of the former Nanisivik Mine, including the following:

- i. Monitoring of water quality;
- ii. Monitoring of geotechnical conditions; and
- iii. Maintenance activities that may be needed to ensure the continued integrity and functionality of completed reclamation works.

Definitions

Minor updates were made to the the list of definitions for the Licence to reflect the status of activities on site and updated scope of the Water Licence.

Enforcement

To ensure that Canzinc complies with the terms and conditions of the Licence, inspectors, designated and empowered by the Ministers of Northern Affairs or Crown-Indigenous Relations may inspect or examine works, activities, and undertakings associated with the use of waters and/or the deposit of waste for the purposes of exercising their powers in accordance with the *NWNSRTA*.³⁵

Compliance

³⁴ Section 56 of the *NWNSRTA* states:

The issuance, amendment, renewal and cancellation of a type A licence, and if a public hearing is held, a Type B licence are subject to the approval of the Minister.

³⁵ Sections 85-88 of the *NWNSRTA*



The Licensee should note that compliance with the terms and conditions of this Licence does not necessarily absolve Canzinc from the responsibility to comply with all other applicable legislation, guidelines, and directives.

PART B GENERAL CONDITIONS

Part B of the Licence addresses many of the general terms and conditions that apply to the Undertaking, such as annual report submission, protocols for handling documents related to the Licence, posting of signage at sites associated with the Undertaking, and more.

PART C CONDITIONS APPLYING TO SECURITY

The Licensee is required to furnish and maintain financial security with the Minister, in the amount of \$1,000,000 in the form that is satisfactory to the Minister. This is a reduction from the \$2,000,000 of financial security required to be posted under the Existing Licence. The reduction reflects the fact that all remediation works have been finalized and that no further reclamation and closure activities are expected to be required at the site, and reflects a contingency amount of \$400,000 as requested by CIRNA.

PART D CONDITIONS APPLYING TO WATER USE AND MANAGEMENT

Section 11 of the *NWNSRTA* states "... no person shall use, or permit the use of, water in Nunavut except in accordance with the conditions of a licence."

Part D of the Licence focuses on water use and related water management plans. Under this Licence, Water use, other than for the sampling of water required to support the approved monitoring under the Licence, is not authorized.

In addition, the Board included terms and conditions in Part D of the Licence that help to preserve the integrity of the freshwater environment.

PART E CONDITIONS APPLYING TO WASTE MANAGEMENT

Part E of the Licence focuses on terms and conditions relevant to Waste management and the associated waste management plans. The Applicant has stated that the activities on-site will be limited to annual monitoring of water quality and geotechnical stability and that no major waste, sewage, or other effluent generations are expected. The terms and conditions in Part E of the Licence were developed taking into account the Licensee's stated intentions and likelihood of little to no generation of waste.



PART F CONDITIONS APPLYING TO MODIFICATIONS

The scope of this Licence does not include any new construction or upgrades. The Licence includes standard conditions that would allow modifications that do not trigger an amendment to the Licence, and specifies that for all proposed modifications to facilities, as-built drawings will be submitted to the Board for review ninety (90) days prior to the completion of the modification.

PART G CONDITIONS APPLYING TO EMERGENCY RESPONSE AND CONTINGENCY PLANNING

Part G contains standard conditions for Emergency Response and Spill Contingency Planning. The Licensee shall continue implementation of the Plan entitled *Spill Contingency Plan, Former Nanisivik Mine Site, dated March 2015* that was previously approved by the Board.

PART H CONDITIONS APPLYING TO THE MONITORING PROGRAM

With respect to the monitoring requirements under the Licence, the NWB's jurisdiction is very broad and the NWB may include conditions in the licence related to monitoring programs to be undertaken³⁶.

All reclamation works on the site were finalized in 2017. The activities authorized under this Licence are limited to post-closure monitoring of water quality in the Twin Lakes Creek, Chris Creek and Landfill watersheds and the overall geotechnical stability of the reclaimed site. The quantity of water required for the sampling purposes is minor and is not expected to exceed 100 litres per year as advised by Canzinc. Amendments to the post-closure monitoring program have been approved in light of the successful results achieved to date. These amendments are described in the two technical documents prepared and submitted by BGC Engineering Inc. and Stantec Consulting Ltd. as stated below.

The Board has approved, with the issuance of this Licence, the following monitoring programs:

- *Water Quality Monitoring Beyond 2019, Nanisivik Mine* (Stantec Consulting Ltd., June 18, 2019); and
- *Geotechnical Monitoring Beyond 2019 – Nanisivik Mine, NU* (BGC Engineering Inc., April 24, 2019), submitted with the Application on June 20, 2019.

The Licensee is required to submit to the Board for review, within sixty (60) days following the Minister's approval or deemed approval of the Licence, an updated "Quality Assurance/Quality Control (QA/QC) Plan."

³⁶ See s. 70(1)(c) of the *NWNSRTA*



The Licensee is required to submit to the Board for review, within sixty (60) days following the Minister's approval or deemed approval of the Licence, updates to the following plans to reflect changes to the monitoring requirements in the renewed and amended Licence:

- a. *Updated Post Closure Geotechnical Monitoring Contingency plan*, dated March 19, 2015;
- b. *Contingency Plan for Water Quality Exceedances, former Nanisivik Mine site*, March 24, 2015; and
- c. *Geotechnical Monitoring Instrument Installation Record and Contingency Plan*, dated March 17, 2015.

PART I CONDITIONS APPLYING TO ABANDONMENT, RECLAMATION AND CLOSURE

The Licensee shall continue to implement the *Nanisivik Mine 2004 Reclamation Plan and Closure Plan* as approved by the Board on July 6, 2004, including monitoring requirements to confirm objectives as approved, or as subsequently revised to incorporate design changes and adaptive engineering required and implemented to reflect actual site conditions and monitoring results over the implementation period, or as may otherwise be required by this Licence or directed by the Board.



APPENDIX B – List of Submissions and Correspondence

Application:

1. Cover letter and initial submission of amendment & renewal application for water licence 1AR-NAN1419 by Canzinc Mines Ltd (Canzinc), c/o Nyrstar, the application concerns the continued post-closure monitoring of water quality and physical stability at the former Nanisivik mine on northern Baffin Island, Nunavut, Canada. The application seeks to renew and amend Water Licence 1AR-NAN1419 issued to Canzinc by the Nunavut Water Board (NWB) on 23 December 2014, dated **June 20, 2019**.

Initial Submission & Correspondence:

1. Cover Letter to Richard Dwyer, NWB, RE: 1AR-NAN1419 – Application for Water Licence Amendment, from Johan Skoglund, Canzinc **dated June 20, 2019**.
2. Submitted **June 20, 2019**, by Canzinc, RE: Application for Water Licence Amendment.
3. Submitted **June 20, 2019**, by Canzinc, RE: Appendix A Executive Summary English.
4. Submitted **June 20, 2019**, by Canzinc, RE: Appendix B Executive Summary Inuktitut.
5. Submitted **June 20, 2019**, by Canzinc, RE: Appendix C Resolutions Canzinc Mines.
6. Submitted **June 20, 2019**, by Canzinc, RE: Appendix D Site Location Map.
7. Submitted **June 20, 2019**, by Canzinc, RE: Appendix E NPC Conformity Determination.
8. Submitted **June 20, 2019**, by Canzinc, RE: Appendix F NIRB 2002 Screening Decision.
9. Submitted **June 20, 2019**, by Canzinc, RE: Appendix G NIRB 2014 Screening Exemption Decision.
10. Submitted **June 20, 2019**, by Canzinc, RE: Appendix H Geotechnical Monitoring Beyond 2019.
11. Submitted **June 20, 2019**, by Canzinc, RE: Appendix I Water Quality Monitoring Beyond 2019.



12. Submitted **June 20, 2019**, by Canzinc, RE: Appendix J Appointment of Officers.
13. Submitted **June 20, 2019**, by Canzinc, RE: Appendix K Canzinc Certificate.
14. Submitted **June 20, 2019**, by Canzinc, RE: Appendix L Compliance Assessment.
15. Cover E-mail to Johan Skoglund, Canzinc, RE: 1AR-NAN1419 – Application for Water Licence Amendment (application acknowledged), from Richard Dwyer, NWB, dated **June 20, 2019**.
16. Letter to Johan Skoglund, Canzinc, RE: Licence No. 1AR-NAN1419; Amendment and Renewal Application by Canzinc Mines Ltd. for Continued Reclamation and Post-Closure Monitoring Activities, Nanisivik Mine Project., from Richard Dwyer, NWB, dated **June 25, 2019**.
17. Cover E-mail to Johan Skoglund, Canzinc, RE: 1AR-NAN1419 Nanisivik Mine Amendment & Renewal Application Completeness Check, from Richard Dwyer, NWB, dated **June 25, 2019**.
18. Cover E-mail to Johan Skoglund, Canzinc, RE: 1AR-NAN1419 Nanisivik Mine Amendment & Renewal Application Completeness Check (applicant to respond to comments), from Richard Dwyer, NWB, dated **July 11, 2019**.
19. Letter to Johan Skoglund, Canzinc, RE: Licence No. 1AR-NAN1419; Amendment and Renewal Application by Canzinc Mines Ltd. for Continued Reclamation and Post-Closure Monitoring Activities, Nanisivik Mine Project, (Notice of Application, Technical Meeting, & Pre-Hearing Conference) from Stephanie Autut, NWB, dated **July 26, 2019**.
20. Cover E-mail to Johan Skoglund, Canzinc, RE: 1AR - NAN1419 Amendment and Canzinc Application Notice and Technical Review (Notice of Application, Technical Meeting, & Pre-Hearing Conference), from Richard Dwyer, NWB, dated **July 26, 2019**.
21. Letter to Richard Dwyer, NWB, RE: Serious harm to fish can be avoided or mitigated - Comment Request for Continued Reclamation and Post-Closure Monitoring Activities, Nanisivik Mine Project, Type A Water Licence Amendment and Renewal, from Lisa Wren, Fisheries and Oceans Canada (DFO), dated **August 13, 2019**.
22. Submitted **August 16, 2019**, by Crown-Indigenous and Northern Affairs (CIRNA) RE: 1AR-NAN1419 – Crown-Indigenous Relation and Northern Affairs Canada (CIRNAC) Technical Review for Water License Renewal/Amendment License Process - Nanisivik Mine Property – Canzinc Ltd. - Nyrstar Canada (Holdings) Ltd. (Nyrstar).



23. Submitted **August 16, 2019**, by Environment and Climate Change Canada (ECCC) RE: 1AR-NAN1419 – Canzinc Mines Ltd. – Nanisivik Mine Project – Type A Water Licence Amendment and Renewal Application.
24. Cover E-mail to Johan Skoglund, Canzinc, RE: 1AR - NAN1419 Amendment and Canzinc Application Notice and Technical Review (next steps technical meeting and pre-hearing conference), from Richard Dwyer, NWB, dated **August 16, 2019**.
25. Submitted **August 22, 2019** by Canzinc RE: 1AR-NAN1419 Amendment and Renewal Application – Responses to Technical Review Comments.
26. Submitted **August 23, 2019** by CIRNA 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).
27. Cover E-mail to Johan Skoglund, Canzinc, RE: 1AR-NAN1419 Canzinc Ltd. Amendment Renewal Technical Meeting Next Steps, from Richard Dwyer, NWB, dated **August 23, 2019**.
28. Letter to Johan Skoglund, Canzinc, RE: Type “A” Water Licence No. 1AR-NAN1419; Amendment and Renewal Application by Canzinc Mines Ltd. for Continued Reclamation and Post-Closure Monitoring Activities, Nanisivik Mine Project; Technical Meeting and Pre-Hearing Conference Final Agenda, from Richard Dwyer, NWB, dated **August 29, 2019**.
29. Submitted **September 3, 2019**, by Canzinc, RE: 1AR-NAN1419 Water Licence Amendment and Renewal Application Technical Meeting and Pre-hearing Conference Canzinc Mines Ltd. 13 September 2019.
30. Submitted **September 3, 2019**, by Canzinc, RE: 1AR-NAN1419 Water Licence Amendment and Renewal Application Technical Meeting and Pre-hearing Conference Canzinc Mines Ltd. 13 September 2019 (Inuktitut).
31. Submitted **September 3, 2019**, by Canzinc, RE: 1AR-NAN1419 Permis des eaux amendé et renouvellement de permis Réunion technique et conférence préparatoire, 13 Septembre 2019 Canzinc Mines Ltd. (French Executive Summary).
32. Cover E-mail to Richard Dwyer, NWB, RE: 1AR-NAN1419 TM-PHC Canzinc presentation (Canzinc Attendees), from Johan Skoglund, Canzinc, dated **September 3, 2019**.
33. Letter to Richard Dwyer, NWB, RE: 1AR-NAN1419 – Canzinc Mines Ltd. – Nanisivik Mine Project – Type A Water Licence Amendment and Renewal



- Application Technical Meeting and Pre-hearing Conference, from Andrea McLandress, ECCC, dated **September 4, 2019**.
34. Submitted **September 5, 2019**, by CIRNA, RE: CanzincMines Ltd.'s Water Licence Renewal/Amendment Application #1AR-NAN1419 Nunavut Water Board Technical Meeting & Pre-Hearing Conference by Teleconference September 12 to 13, 2019.
 35. Submitted **September 5, 2019**, by CIRNA, RE: CanzincMines Ltd.'s Water Licence Renewal/Amendment Application #1AR-NAN1419 Nunavut Water Board Technical Meeting & Pre-Hearing Conference by Teleconference September 12 to 13, 2019 (Inuktitut).
 36. Cover E-mail to Johan Skoglund, Canzinc, RE: 1AR-NAN1419 Canzinc Ltd. Amendment Renewal Technical Meeting Next Steps, from Richard Dwyer, NWB, dated **September 5, 2019**.
 37. Submitted by **September 6, 2019**, by CIRNA, RE: Executive Summary Technical Meeting and Pre-Hearing Conference Renewal Application Water Licence #1AR-NAN1419 Nanisivik Mine Site Canzinc Mines Ltd. Nyrstar Canada (Holdings) Ltd. Qikiqtani Region, Nunavut.
 38. Cover E-mail to Richard Dwyer, NWB, RE: EXECUTIVE SUMMARY FOR NANISIVIK WATER LICENCE RENEWAL - 1AR-NAN1419- NYRSTAR (CIRNA Attendees) dated **September 6, 2019**.
 39. Letter to Johan Skoglund, Canzinc, RE: Type "A" Water Licence No. 1AR-NAN1419; Amendment and Renewal Application by Canzinc Mines Ltd. for Continued Reclamation and Post-Closure Monitoring Activities, Nanisivik Mine Project; Technical Meeting and Pre-Hearing Conference Final Agenda, from Richard Dwyer, NWB, dated **September 6, 2019**.
 40. Cover E-mail to Johan Skoglund, Canzinc, RE: 1AR - NAN1419 Amendment and Application Technical Meeting & Pre-Hearing Conference draft agenda, from Richard Dwyer, NWB, dated **September 6, 2019**.
 41. Submitted **September 12, 2019**, by CIRNA, RE: **CanzincMines Ltd.'s Water Licence Renewal/ Amendment Application #1AR-NAN1419** Nunavut Water Board Technical Meeting & Pre-Hearing Conference by Teleconference September 12 to 13, 2019 (updated presentation).
 42. Submitted **September 12, 2019**, by CIRNA, RE: Executive Summary Technical Meeting and Pre-Hearing Conference Renewal Application Water Licence #1AR-NAN1419 Nanisivik Mine Site Canzinc Mines Ltd. Nyrstar Canada (Holdings) Ltd. Qikiqtani Region, Nunavut (Inuktitut).



43. Cover E-mail to Johan Skoglund, Canzinc, RE: 1AR - NAN1419 Amendment and Application Technical Meeting & Pre-Hearing Conference draft agenda (updated CIRNA presentation distribution) dated **September 12, 2019**.
44. Submitted **September 13, 2019**, by CIRNA, RE: Executive Summary Technical Meeting and Pre-Hearing Conference Renewal Application Water Licence #1AR-NAN1419 Nanisivik Mine Site Canzinc Mines Ltd. Nyrstar Canada (Holdings) Ltd. Qikiqtani Region, Nunavut (French).
45. Letter to Nanisivik Distribution List RE: Type "A" Water Licence No: 1AR-NAN1419: Pre- Hearing Conference Decision Regarding an Application for Renewal and Amendment, from Stephanie Autut, NWB, dated September 20, 2019
46. Cover E-mail to Johan Skoglund, Canzinc, RE: Type "A" Water Licence No: 1AR-NAN1419: Pre- Hearing Conference Decision Regarding an Application for Renewal and Amendment, from Richard Dwyer, NWB, dated **September 20, 2019**.
47. Submitted **October 14, 2019**, by Canzinc, RE: 1AR-NAN1419 Amendment and Renewal Application – Response to List of Commitments Generated during Technical Meeting/Pre-Hearing Conference.
48. Submitted **October 14, 2019**, by Canzinc, RE: Nanisivik Mine 2004 Reclamation and Closure Plan
49. Submitted **October 14, 2019**, by Canzinc, RE: Proposed Licence Framework
50. Submitted **October 14, 2019**, by Canzinc, RE: The Strathcona Agreement dated June 18, 1974.
51. Cover E-mail to Johan Skoglund, Canzinc, RE: 1AR-NAN1419 Canzinc Response to Commitments, from Richard Dwyer, NWB, dated **October 15, 2019**.
52. Submitted **November 1, 2019** by CIRNA, RE: 1AR-NAN1419 – Crown-Indigenous Relations and Northern Affairs Canada Updated Security Estimate for Water Licence Renewal/Amendment Process - Nanisivik Mine Property – Canzinc Ltd. - Nyrstar Canada (Holdings) Ltd.
53. Cover E-mail to Johan Skoglund, Canzinc, RE: 1AR-NAN1419 CIRNA Updated Security Estimate, from Richard Dwyer NWB, dated **November 1, 2019**.
54. Submitted **November 19, 2019** by CIRNA, RE: 1AR-NAN1419 – Crown-Indigenous Relations and Northern Affairs Canada Public Hearing – Final Comments with Closing Arguments for Water Licence Renewal/Amendment Process - Nanisivik Mine Property – Canzinc Ltd. - Nyrstar Canada (Holdings) Ltd.



55. Submitted **November 19, 2019** by CIRNA, RE: Executive Summary (Inuktitut, French & English).
56. Cover E-mail to Ian Parson, CIRNA, RE: Regarding Nanisivik Public Hearing, from Kayla Carter, NWB, dated **November 19, 2019**.
57. Letter to Nanisivik Distribution List, RE: Closure of the Public Hearing Record in Respect of the Type “A” Water Licence No. 1AR-NAN1419 by Canzinc Mines Ltd. for the Nanisivik Mine Project, from Richard Dwyer, NWB, dated **November 28, 2019**, f
58. Cover E-mail to Johan Skoglund, RE: 1AR-NAN1419 Canzinc Mines Ltd amendment & renewal application Closure of the Public Hearing Record, from Richard Dwyer, NWB, dated **November 28, 2019**.