

## **Application for Water Licence Amendment**



Application for Water Licence Amendment

Canzinco Ltd.

Application Submission Date: 13 November 2013

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NUNAVUT WATER BOARD  
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NUNAVUT WATER BOARD

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## APPLICATION FOR WATER LICENCE AMENDMENT

The applicant is referred to the NWB's Guide 7: Licensee Requirements Following the Issuance of a Water Licence for more information about this application form.

Where possible, provide background information regarding the original licence application or attach previously submitted information.

**EXISTING LICENCE NO:** 1AR-NAN0914

### 1. LICENSEE CONTACT INFORMATION

*Is the licensee the same as that referred to on the existing licence?* **Yes**

The amended licence will be held by the same licensee as the existing licence, i.e. Canzinc Ltd. As previously notified to the NWB, Canzinc Ltd. is a wholly owned subsidiary of Breakwater Resources Ltd. which in turn is a wholly owned subsidiary of Nyrstar Sales & Marketing AG. Nyrstar is an integrated mining and metals business listed on NYSE Euronext Brussels.

The mailing address of Canzinc Ltd. is:

Canzinc Ltd.  
c/o Nyrstar Canada (Holdings) Ltd.  
2840 – 650 West Georgia Street  
PO Box #11552. Vancouver, BC  
V6B 4N8, Canada

Phone: 604 336 8300

Fax: 604 336 8329

e-mail: [Johan.skoglund@nyrstar.com](mailto:Johan.skoglund@nyrstar.com)

### 2. LICENSEE REPRESENTATIVE CONTACT INFORMATION – If different from Block 1.

Name: Johan Skoglund

Address: As above

Johan Skoglund is authorized to act on behalf of Canzinco Ltd. Please refer to Appendix C for an authorization letter.

**3. NAME OF PROJECT**

*Has the name of the project changed?* **No**

**4. LOCATION OF UNDERTAKING**

*Does the proposed amendment change the location of the amended undertaking?* **No**

*Provide the project extents and camp locations. Identify proposed changes.*

**Project Extents**

Latitude: (73°02' N)      Longitude: (84°32' W)

**Camp Location(s)**

N/A. There is no camp associated with the former Nanisivik mine.

**5. MAP**

*Does the proposed amendment change the location of any of the main components of the undertaking?* **No**

A site Location Map is attached in Appendix D. The location of the undertaking remains the same as under the existing licence.

NTS Map Sheet No.: 48 C/02

**6. NATURE OF INTEREST IN THE LAND**

*Does the proposed amendment change the nature of the interest in the land?* **No**

*Check any of the following that are applicable to the proposed undertaking (at least one box under the 'Surface' header must be checked).*

**Sub-surface**

☐ Mineral Lease from Nunavut Tunngavik Incorporated (NTI)  
Date (expected date) of issuance: \_\_\_\_\_ Date of expiry: \_\_\_\_\_

☐ Mineral Lease from Indian and Northern Affairs Canada (INAC)  
Date (expected date) of issuance: \_\_\_\_\_ Date of expiry: \_\_\_\_\_

## Surface

☒ Crown Land Use Authorization from Indian and Northern Affairs Canada (INAC). Canzinco holds several surface leases issued by INAC. The leases have expired but have not been surrendered. Canzinco is actively working with the Aboriginal Affairs and Northern Development (AANDC) to consolidate and establish surface leases appropriate to the ongoing monitoring activities completed under licence 1AR-NAN0914.

Lease No. <u>48 C/1-5-2</u>	Date of issuance: <u>8 Aug 1984</u>	Date of expiry: <u>31 May 2004</u>
Lease No. <u>48 C/1-6-2</u>	Date of issuance: <u>4 May 1987</u>	Date of expiry: <u>31 Oct 2006</u>
Lease No. <u>48 C/1-7-2</u>	Date of issuance: <u>4 May 1987</u>	Date of expiry: <u>31 Oct 2006</u>
Lease No. <u>48 C/1-8-13</u>	Date of issuance: <u>1 Jan 2003</u>	Date of expiry: <u>31 Dec 2007</u>
Lease No. <u>48 C/1-9-3</u>	Date of issuance: <u>12 Mar 1996</u>	Date of expiry: <u>31 Dec 1999</u>

☐ Inuit Owned Land (IOL) Authorization from Kitikmeot Inuit Association (KIA)  
Date (expected date) of issuance: \_\_\_\_\_ Date of expiry: \_\_\_\_\_

☐ IOL Authorization from Kivalliq Inuit Association (KivIA)  
Date (expected date) of issuance: \_\_\_\_\_ Date of expiry: \_\_\_\_\_

☐ IOL Authorization from Qikiqtani Inuit Association (QIA)  
Date (expected date) of issuance: \_\_\_\_\_ Date of expiry: \_\_\_\_\_

## ☒ Commissioner's Land Use Authorization

The majority of Canzinco's leases on Commissioner's Land has been surrendered; however discussions with the Government of Nunavut Land Administration Department identified eight leases which are yet to be surrendered. These leases are listed below. Canzinco is actively working with the GN Land Administration to surrender or, as appropriate, renew leases required for the ongoing monitoring activities completed under licence 1AR-NAN0914.

Lease No. <u>L-8008T</u>	Date of issuance: <u>1 Sept 1989</u>	Date of expiry: <u>01 Sept 2019</u>
Lease No. <u>L-8677T</u>	Date of issuance: <u>26 Sept 1989</u>	Date of expiry: <u>31 Dec 2010</u>
Lease No. <u>L-40041T</u>	Date of issuance: <u>1 Jan 1990</u>	Date of expiry: <u>31 Dec 1999</u>
Lease No. <u>L-40042T</u>	Date of issuance: <u>1 Jan 1990</u>	Date of expiry: <u>31 Dec 1999</u>
Lease No. <u>L-40043T</u>	Date of issuance: <u>1 Jan 1990</u>	Date of expiry: <u>31 Dec 1999</u>
Lease No. <u>LC-40044T</u>	Date of issuance: <u>1 Jan 1990</u>	Date of expiry: <u>31 Dec 1999</u>
Lease No. <u>LC-40163T</u>	Date of issuance: <u>1 Jan 1990</u>	Date of expiry: <u>31 Dec 1999</u>
Lease No. <u>L-2455T</u>	Date of issuance: <u>1 June 1979</u>	Date of expiry: <u>31 May 1994</u>

☒ Other: Lease No. L-9195300 with the Department of Fisheries and Oceans

Date of issuance: 22 March 2001 Date of expiry: 31 December 2003

*Is the name of the entity(s) holding authorizations the same as that considered in the existing water licence?* **Yes**

## 7. NUNAVUT PLANNING COMMISSION (NPC) DETERMINATION

Indicate the land use planning area in which the existing project is located.

- ☒ North Baffin  
☐ South Baffin  
☐ Akunnig

- ☐ Keewatin  
☐ Sanikiluaq  
☐ West Kitikmeot

*Does the proposed amendment change the land use planning area?* **No**

*Was a land use plan conformity determination required from NPC prior to the issuance of the existing water licence?* **Yes.** A positive land use plan conformity determination was issued by NPC on 19 June 2008. A copy of the conformity determination is provided in Appendix E.

*Does the proposed amendment change the original NPC conformity determination or the need to obtain one?* **No**

*If No, provide written confirmation from NPC confirming that a land use plan conformity review is not required.*

Please refer to Appendix E for correspondence with the NPC in regards to the need for a land use plan conformity review.

## 8. NUNAVUT IMPACT REVIEW BOARD (NIRB) DETERMINATION

*Was a screening determination required from NIRB prior to the issuance of the existing water licence?* **Yes**

The original Canzinc Ltd. "Closure and Reclamation Plan for the Nanisivik Mine" project proposal (NIRB File No.: 02MC117) was screened by the NIRB. A screening decision issued on 7 October 2002 determined that the proposed project could proceed subject to the NIRB's recommended project-specific terms and conditions.

Canzinc's 2008 water licence renewal application was reviewed by the NIRB and found to be exempt from the requirement for further screening subject to the terms and conditions recommended in the original 7 October 2002 Screening Decision Report.

The original NIRB Screening Decision Report (File No. 02MC117) and all related file information are available from the NIRB's online public registry at the following location:

<http://ftp.nirb.ca/01-SCREENINGS/COMPLETED%20SCREENINGS/2002-TO%20BE%20COMPLETED/02MC117-CanZinc%20Limited-Nanisivik/>

*Does the proposed amendment change the original NIRB screening determination or the need to obtain one?* **No**

*If No, provide written confirmation from NIRB confirming that a screening determination is not required.*

Please refer to Appendix F for correspondence with the NIRB in regards to the need for a screening determination.

## 9. DESCRIPTION OF UNDERTAKING

*Does the proposed amendment change the description of the undertaking?* **Yes**

The nature and overall scope of the undertakings remain the same as those authorized through Water Licence 1AR-NAN0914, i.e. post-closure monitoring of rehabilitated mining areas and reclamation of contaminated soil at the former fuel tank farm. The location of these activities also remains unchanged.

Based on the results of the post-closure monitoring completed to date and in order to improve the efficiency of the soil remediation activities, the following amendments are proposed:

- The geotechnical monitoring program pursuant to Part I of the existing Water Licence has demonstrated that completed surface reclamation covers and other geotechnical installations are performing in accordance with their design intents. Importantly, geothermal monitoring data collected to date indicates that installed thermal covers achieve their design objectives by confining the active thaw layer within the covers and maintaining the underlying waste materials in a frozen state. Given the successful results to date, Canzinc proposes an amendment to Schedule I of the existing Water Licence resulting in a reduced monitoring schedule. Further details about the results of the geotechnical monitoring program to date and the proposed new monitoring schedule are provided in a memo from Canzinc's geotechnical engineer (BGC Engineering) included as Appendix G to this application.
- Similar to the geotechnical monitoring, the results of the water quality monitoring program have demonstrated stable conditions and confirmed that implemented closure and rehabilitation measures perform as expected. Monitoring results in the 159-4 compliance station, at the outflow from the former tailing storage facility, have generally remained near or below analytical detection limits which are significantly below the discharge limits established in the existing Water Licence. Based on the positive monitoring results to date, an amendment to Schedule I of the existing Water Licence is proposed including a reduction in monitoring stations, sampling frequency and analytical parameters. Further details about the results of the water quality monitoring completed to date and the proposed new monitoring program are provided in a memo from Canzinc's water quality consultant (Stantec Consulting) included as Appendix H to this application.
- Reclamation of the former fuel tank farm has been undertaken as per the methodology established in the Abandonment and Reclamation Plan (Stantec 8 January 2010; approved by Nunavut Water Board on 26 April 2010) for this work. Key closure and reclamation activities completed under this plan has included: decommissioning and removal of petroleum storage tanks and associated infrastructure; delineation of contaminated soil; construction of soil treatment facilities; and excavation and treatment of contaminated

soil.

At the end of the 2013 remediation season, all activities associated with tank decommissioning, soil contamination delineation and treatment facility construction have been completed and only very minor excavation works remain. As such, future works under a renewed Licence will primarily be associated with the treatment and management of excavated contaminated soil and applying the soil quality remediation objectives (SQROs) determined in the Abandonment and Reclamation Plan the amount of soil that remains to be treated is approximately 10,300 m<sup>3</sup>. The starting quantity of contaminated soil exceeding the SQROs was approximately 17,000 m<sup>3</sup> meaning that almost 7,000 m<sup>3</sup> of soil has been successfully treated since the remediation efforts commenced. It's worth noting that the total quantity of soil requiring treatment (i.e. 17,000 m<sup>3</sup>) is significantly higher than the volume foreseen in the 2010 Abandonment and Reclamation Plan (8,000 m<sup>3</sup>). Applying the existing soil treatment approach established in the Abandonment and Reclamation Plan (i.e. nutrient amended landfarming) and based on the soil treatment rates achieved to date, it is estimated that the remediation works will be completed at the end of the 2016 field season. Further information about the soil remediation works completed to date are provided in a memo from Canzinco's remediation consultant (SRK Consulting) included as Appendix I to this application.

Consultation with key stakeholders with current and future interests in the Nanisivik dock site has revealed potential land use conflicts in the areas used for soil remediation. Specifically, the conflict is a result of the potential construction of a Department of National Defence (DND) Naval Facility, which is planned to be initiated in August 2014. In order to assist the DND in implementing their construction plans, Canzinco has developed an alternative remediation approach which would expedite the evacuation of the contaminated soil from the DND's construction area. In brief, this alternative approach involves the transfer of the contamination soil to an ecologically non-sensitive area, elimination of exposure pathways by capping the materials with clean soil and, simultaneously to these risk management activities, the pursuit of studies to demonstrate that the residual low levels of soil contamination do not pose risks to human health or the environment. The details of this approach are described in a memo from Hemmera included as Appendix J to this application.

In order to facilitate making the area available for DND, Canzinco requests as part of the Licence amendment application that the remediation methodology for the contaminated soil be modified as per the preferred remedial approach outlined in Section 5.0 of Appendix J. With respect to the implementation of this approach, Canzinco proposes that all soils with residual petroleum hydrocarbon concentrations exceeding existing SQROs be transferred to the 'Upper Treatment Area' currently used for landfarming. This area meets the location selection criteria recommended on page 15 of Hemmera's memo. The location of the Upper Treatment Area is shown on the plan included in Appendix I. Furthermore, Canzinco proposes an amendment to Part J.2 of the Water Licence requiring the development and submission to the Water Board for approval a new Abandonment



and Reclamation Plan that reflects the preferred remedial approach described in Appendix J. The contents of this Plan are proposed to include:

- Requirements for the transfer and placement of contaminated soil in the Upper Treatment Area, including consideration of contaminant levels, geotechnical stability, cover thickness and material specifications, and desired landforms;
- A monitoring and maintenance plan intended to assess the rate of hydrocarbon attenuation in the encapsulated soil and to monitor geotechnical stability,
- A contingency plan;
- A plan for developing site specific Soil Quality Remediation Objectives; and
- A detailed schedule for all tasks and activities.

## 10. OPTIONS

*Does the proposed amendment change any of the alternative methods and locations that were considered to carry out the project?* **Yes**

*Provide a brief explanation of the alternative methods or locations that were considered to carry out the project. Identify proposed changes.*

Alternative methods and locations for the remediation of the petroleum hydrocarbon contaminated soil have been considered and the options analysis is presented in Appendix J.

## 11. CLASSIFICATION OF PRIMARY UNDERTAKING

Indicate the primary classification of undertaking for the existing licence by checking one of the following boxes:

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Industrial  | <input type="checkbox"/> Agricultural                             |
| <input type="checkbox"/> Mining and Milling (includes exploration/drilling/exploration camps) |   |
| <input type="checkbox"/> Conservation   |   |
| <input type="checkbox"/> Municipal (includes camps/lodges)                                    | <input type="checkbox"/> Recreational                             |
| <input type="checkbox"/> Power  | <input type="checkbox"/> Miscellaneous (describe below):<br>_____ |

*Does the proposed amendment change the classification of primary undertaking?* **No**

Information in accordance with applicable Supplemental Information Guidelines (SIG) must be updated and submitted with an Application for Amendment. Indicate which SIG(s) are applicable to your application.

- ☐ Hydrostatic Testing
- ☐ Tannery
- ☐ Tourist / Remote Camp
- ☒ Landfarm & On-Site Storage of Hydrocarbon Contaminated Soil
- ☐ Onshore Oil and Gas Exploration Drilling
- ☐ Mineral Exploration / Remote Camp
- ☐ Advanced Exploration
- ☐ Mine Development
- ☐ Municipal
- ☐ General Water Works
- ☐ Power

A Concordance Table providing references to information addressing the requirements of the SIG for Landfarm & On-Site Storage of Hydrocarbon Contaminated Soil is included in Appendix K.

## 12. WATER USE

Indicate, using the boxes below, the types of water use(s) approved in the existing licence.

- |   |   |
|---|---|
| <input type="checkbox"/> To obtain water for camp/ municipal purposes       | <input type="checkbox"/> To divert a watercourse                    |
| <input checked="" type="checkbox"/> To obtain water for industrial purposes | <input type="checkbox"/> To modify the bed or bank of a watercourse |
| <input type="checkbox"/> To cross a watercourse                             | <input type="checkbox"/> Flood control                              |
| <input type="checkbox"/> To alter the flow of, or store water               |   |
| <input type="checkbox"/> Other: _____                                       |   |

Does the proposed amendment change the type(s) of water use(s)?

☐ Yes ☒ No

If Yes, indicate using the boxes below, the proposed change(s) to the type(s) of water use(s) noting any water use(s) that are to be added, continued, or removed.

- |   |   |
|---|---|
| <input type="checkbox"/> To obtain water for camp/ municipal purposes | <input type="checkbox"/> To divert a watercourse                    |
| <input type="checkbox"/> To obtain water for industrial purposes      | <input type="checkbox"/> To modify the bed or bank of a watercourse |
| <input type="checkbox"/> To cross a watercourse                       | <input type="checkbox"/> Flood control                              |
| <input type="checkbox"/> To alter the flow of, or store water         |   |
| <input type="checkbox"/> Other: _____                                 |   |

## 13. QUANTITY OF WATER INVOLVED

Does the proposed amendment change the source of water? ☐ Yes ☒ No

Indicate the water source(s). Identify proposed changes:

The existing Water Licence authorizes the withdrawal of fresh water for domestic use from East Twin Lake and water use for the purposes of mitigation from East Twin Lake, West Twin Creek and Chris Creek. Please refer to the Site Layout Map in Appendix L for a description of the location of the water bodies in question.

Does the proposed amendment change the quality of the water source and/or its available capacity?

☐ Yes ☒ No

Describe the quality of the water source(s) and the available capacity(s). Identify any changes.: N/A

Does the proposed amendment change the overall quantity of water to be used?

☐ Yes ☒ No

Provide the overall estimated quantity to be used. Identify proposed changes. Less than 100 m<sup>3</sup>/day.

Under the existing Water Licence, no uses of water occurred in 2009, 2010, 2011 or 2012 and only very minor quantities of water (approximately 20 m<sup>3</sup> in total) were used in 2013. Given that the vast

majority of the reclamation works have been completed, future water use needs will remain low and any potential water withdrawals would be small to insignificant in nature.

*Does the proposed amendment change the quantity of water to be used from each source?*

☐ Yes ☒ No

*Provide the estimated quantity(s) of water to be used from each source. Identify proposed changes. : N/A*

*Does the proposed amendment change the quantity of water to be used for each purpose?*

☐ Yes ☒ No

*Provide the estimated quantities to be used for each purpose (camp, drilling, etc.). Identify proposed changes.: N/A*

*Does the proposed amendment change the method(s) of extraction?*

☐ Yes ☒ No

*Describe the method(s) of extraction. Identify proposed changes. N/A*

*Does the proposed amendment change the quantity(s) of water returned to source(s)?*

☐ Yes ☒ No

*Estimated quantity(s) of water returned to source(s). Identify proposed changes. N/A*

*Does the proposed amendment change the quality(s) of water returned to source(s)?*

☐ Yes ☒ No

*Describe the quality(s) of water(s) returned to source(s). Identify any changes. N/A*

#### 14. WASTE

*Check the appropriate box(s) to indicate the types of waste(s) approved in the existing licence.*

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Sewage                       | <input type="checkbox"/> Waste oil                             |
| <input checked="" type="checkbox"/> Solid Waste                  | <input type="checkbox"/> Greywater                             |
| <input checked="" type="checkbox"/> Hazardous (disposal offsite) | <input checked="" type="checkbox"/> Sludges (disposal offsite) |
| <input checked="" type="checkbox"/> Bulky Items/Scrap Metal      | <input checked="" type="checkbox"/> Contaminated soil          |
| <input type="checkbox"/> Animal Waste                            |  |
| <input type="checkbox"/> Other (describe):                       |  |

*Does the proposed amendment change the type(s) of waste(s) to be generated or deposited?*

☒ Yes ☐ No

*If Yes, indicate using the boxes below, the proposed change(s) to the type(s) of waste(s) to be generated and/or deposited noting the addition, removal or continued generation and/or disposal of waste(s).*

**Waste types which will no longer be generated and therefore do not need to be included in an**

amended Licence:

☒ Sludges

Waste types which will continue to be generated and therefore need to be included in an amended Licence:

- ☒ Hazardous (disposal off-site at approved facility)
- ☒ Bulky Items/Scrap Metal
- ☒ Sewage
- ☒ Contaminated soil
- ☒ Solid Waste

With respect to Bulky Items/Scrap Metal, approximately 30 m<sup>3</sup> of concrete, rebar, cable and other inert non-hazardous waste materials have accumulated on site. In order to dispose of this waste and any similar materials generated through on-going activities, Canzinco is seeking an amendment to Part F Conditions Applying to Waste Disposal and Management of the Water Licence to allow for the disposal of scrap metal and other bulky non-hazardous materials in an on-site landfill. It is proposed that the amended Licence includes a requirement to develop and submit to the Water Board for approval a Solid Waste Management Plan and Landfill Closure Plan.

## 15. QUANTITY AND QUALITY OF WASTE INVOLVED

*Does the proposed amendment change the quantity(s) of the types of wastes involved?*

☒ Yes   ☐ No

Refer to Appendix I for a description of the quantities of contaminated soil remaining to be remediated. With respect to sewage, hazardous waste, solid waste and scrap metal, only were minor quantities of these waste fractions are generated/remain to be disposed of. Refer to the table at the end of Block 15 for quantity estimates associated with these waste streams.

*Does the proposed amendment change the composition(s) of the types of wastes involved?*

☐ Yes   ☒ No

*Does the proposed amendment change the method(s) of treatment for the types of waste involved?*

☐ Yes   No ☒

*Does the proposed amendment change the method(s) of disposal for the types of waste involved?*

☒ Yes   ☐ No

Refer to Appendix J for a description of methods of disposal for contaminated soil.

*For each type of waste indicated in Block 14, describe its composition, quantity in cubic meters/day, method of treatment and method of disposal.*

Type of Waste	Composition	Quantity Generated	Treatment Method	Disposal Method
Sewage	Minor quantities of sewage are generated from the remediation activities at the dock site	Less than 1 m <sup>3</sup> per year.	N/A	The sewage is disposed of in the Arctic Bay landfill.
Hazardous Waste	Empty aerosol cans, batteries and other potentially hazardous waste generated from the soil remediation activities	Less than 1 m <sup>3</sup> per year.	N/A Placed in secure storage awaiting shipment to an approved disposal facility	Off-site at approved disposal facilities
Solid Waste	Packaging, food waste and other general garbage generated from the remediation activities at the dock site	Less than 5 m <sup>3</sup> per year.	N/A	Solid waste is disposed on in the Arctic Bay landfill.
Bulky Items/ Scrap metal	Cables, metal parts and other scrap encountered across the mine site has been collected in a designated area near the former industrial complex. Waste concrete is stored at the	Approximately 25 m <sup>3</sup> of scrap metal and 5 m <sup>3</sup> of waste concrete.	N/A	Disposal in on-site landfill under a Solid Waste Management Plan and Landfill Closure Plan.

	dock site.			
Contaminated Soil	Petroleum hydrocarbons	Approximately 10,300 m <sup>3</sup> remaining to be remediated	As per Appendix J	As per Appendix J

#### 16. OTHER AUTHORIZATIONS

*Does the proposed amendment change the need for other authorizations in addition to the sub-surface and surface land use authorizations provided in Block 6?*

☐ Yes ☒ No

*If Yes, indicate any additional authorizations required, which authorizations are no longer required, and which authorizations continue to be required.*

*For each provide the following:*

*Authorization:* \_\_\_\_\_

*Administering Agency:* \_\_\_\_\_

*Project Activity:* \_\_\_\_\_

*Date (expected date) of issuance:* \_\_\_\_\_ *Date of expiry:* \_\_\_\_\_

#### 17. PREDICTED ENVIRONMENTAL IMPACTS OF UNDERTAKING AND PROPOSED MITIGATION MEASURES

*Does the proposed amendment change the predicted environmental impacts of the undertaking or the mitigation measures?*

☐ Yes ☒ No

*Describe direct, indirect, and cumulative impacts related to water and waste. Identify any changes.*

#### 18. WATER RIGHTS OF EXISTING AND OTHER WATER USERS

*Was compensation paid and/or an agreement(s) for compensation been entered into with any existing or other users of water during consideration of the existing licence?*

☐ Yes ☒ No

*If Yes, provide the names, addresses and the nature of water use by those persons or properties.*

*Does the proposed amendment adversely affect any known persons or property including those that hold licences for water use in precedence to the application, domestic users, in-stream users, authorized waste depositors, owners of property, occupiers of property, and/or holders of outfitting concessions, registered trapline holders, and holders of other rights of a similar nature?*

☐ Yes ☒ No

*If Yes, provide the names, addresses and the nature of water use of those persons or properties.*

*Advise the Board if compensation has been paid and/or an agreement(s) for compensation has been reached with any existing or other water users with respect to the proposed amendment.*

## 19. INUIT WATER RIGHTS

*Was compensation paid/ or an agreement(s) for compensation been entered into with any Designated Inuit Organization (DIO) during consideration of the existing licence?*

☐ Yes ☒ No

*If Yes, which DIO(s) \_\_\_\_\_*

*Does the proposed amendment substantially affect the quality, quantity or flow of waters flowing through Inuit Owned Land (IOL)?*

☐ Yes ☒ No

*If Yes, advise the Board if negotiations have commenced or an agreement to pay compensation for any loss or damage has been reached with one or more DIO(s) with respect to the proposed amendment.*

## 20. CONSULTATION - Provide a summary of any consultation meetings including when the meetings were held, where and with whom. Include a list of concerns expressed and measures to address concerns.

In-person consultation meetings involving a selection of key stakeholders were held in July 2013. The purpose of the meetings were to present the scope and results of the reclamation and monitoring work completed at Nanisivik since 2009, as well as to inform about and solicit feedback regarding the Licence amendment being sought by Canzinc. In addition, telephone conferences with representatives from the Department of National Defence (DND) and the Department of Fisheries and Oceans (DFO) were held in October and November 2013. The purpose of these interactions were to discuss and seek feedback on alternative remediation approaches for the contaminated soil at the dock site. A summary of the consultation meetings are provided below:

Stakeholder: Government of Nunavut		Location: Iqaluit	Date: 10 July 2013
Attendees:	<ul style="list-style-type: none"> <li>▪ Agnes Simonfalvy, Environment Coordinator, Department of Economic Development &amp; Transportation</li> <li>▪ Lou Kamermans, Socio-Economic Environmental Assessment Coordinator, Department of Economic Development &amp; Transportation</li> <li>▪ Justin Buller, Environmental Assessment Coordinator &amp; Scientist, Department of Environment</li> <li>▪ Robert Eno, Director, Department of Environment</li> <li>▪ Grant Hipfner, Fiscal Advisor, Department of Finance</li> <li>▪ Bill Westwell, Senior Manager, Municipal Planning, Department of Community and Government Services</li> <li>▪ Cindy Kieu, Legal Counsel, Department of Justice</li> <li>▪ Johan Skoglund, Group Manager Environment, Nyrstar</li> <li>▪ Arlene Laudrum, Principal Consultant, SRK Consulting</li> </ul>		

Concerns and Responses	Canzinco met with representatives of the GN to provide a project update and to discuss the planned renewal of Canzinco's Water Licence. No significant concerns were raised by the GN representatives attending the meeting.
<b>Stakeholder: Aboriginal Affairs and Northern Development Canada</b>	
<b>Location: Iqaluit</b>	
<b>Date: 10 July 2013</b>	
Attendees:	<ul style="list-style-type: none"> <li>▪ David Abernethy, Regional Coordinator, Nunavut Water Resources Division</li> <li>▪ Murray Ball, Manager Water Resources</li> <li>▪ Brian Tattuinee, Land Specialist, Nunavut regional Office</li> <li>▪ Jeff Mercer, Manager, Lands Administration</li> <li>▪ Paul Budkewitsch, District Geologist, Mineral Resources</li> <li>▪ Ian Parsons, Regional Coordinator, Nunavut Regional Office</li> <li>▪ Karen Costello, Director, Resource Management</li> <li>▪ Yongshu Fan, Senior Environmental Assessment Coordinator, Environment Canada, Environmental Assessment North</li> <li>▪ Carey Ogilvie, Head, Environment Canada, Environmental Assessment North</li> <li>▪ Johan Skoglund, Group Manager Environment, Nyrstar</li> <li>▪ Arlene Laudrum, Principal Consultant, SRK Consulting</li> </ul>
Concerns and Responses	The AANDC advised that Canzinco holds several surface leases which need to be cancelled or renewed. Following the meeting, a process has been initiated to consolidate, renew and adapt Canzinco's leases to suit the current post-closure monitoring activities (see Block 6).
<b>Stakeholder: Hamlet of Arctic Bay</b>	
<b>Location: Arctic Bay</b>	
<b>Date: 10 July 2013</b>	
Attendees:	<ul style="list-style-type: none"> <li>▪ Frank May, Mayor</li> <li>▪ Geela Arnagumajaq-Ejangraq, Deputy Mayor</li> <li>▪ Emma Byukuluk, Councilor</li> <li>▪ Susanna Barnlabas, Councilor</li> <li>▪ Olayuk Noqitarvik, Councilor</li> <li>▪ Valerie Taqtu Qaunraq, Acting Senior Administrative Officer</li> <li>▪ Mishak Allurut, Translator</li> <li>▪ Johan Skoglund, Group Manager Environment, Nyrstar</li> <li>▪ Arlene Laudrum, Principal Consultant, SRK Consulting</li> <li>▪ Geoff Claypool, BGC Consulting</li> </ul>
Concerns and Responses	<p>The Hamlet members expressed concern about the marine life near the port facility and queried whether current and past activities had impacted seals and other animals living in this area. Canzinco representatives explained that current activities are likely to be of low impact as there are no effluent discharges into the sea from the port area and that the ongoing remediation activities are aimed at removing sources of contamination which may otherwise migrate into the ocean.</p> <p>The Hamlet members asked about the Nanisivik airport and the potential for fuel</p>



	storage facilities remaining at the airport to impact the Hamlet’s fresh water sources. Canzinco representatives responded that the airport is under the administration of GN Department of Transportation and that the mine is not responsible for rehabilitation of this area.		
<b>Stakeholder: Arctic Bay Hunters and Trappers Organisation (HTO)</b>		<b>Location: Arctic Bay</b>	<b>Date: 11 July 2013</b>
Attendees:	<ul style="list-style-type: none"><li>▪ Andrew Taqtu - Chairperson</li><li>▪ Qaumajuq Oyukuluk, Vice Chairman</li><li>▪ Andrew Muckpa, Member</li><li>▪ Doreen Irqaqsaq-Taqtu, Manager</li><li>▪ Mishak Allurut, Translator</li><li>▪ Johan Skoglund, Group Manager Environment, Nyrstar</li><li>▪ Arlene Laudrum, Principal Consultant, SRK Consulting</li></ul>		
Concerns and Responses	<p>The HTO members asked about the remediation work being completed at the port site. Canzinco representatives provided an overview of the work being completed including a description of remediation methods, remaining work etc.</p> <p>HTO members explained that the mine site is generally not used for hunting activities and that the reclaimed mining areas are rarely accessed for hunting purposes.</p>		
<b>Stakeholder: DFO and DND</b>		<b>Location: By phone</b>	<b>Date: October/ November 2013</b>
Attendees:	<ul style="list-style-type: none"><li>▪ Lawrence Swift, Director Real Property, Safety and Security, Central &amp; Arctic Region, DFO</li><li>▪ Dave Burden, Regional Director General, Central &amp; Arctic Region, DFO</li><li>▪ Kevin Bill, Regional Environmental Coordinator, DFO</li><li>▪ Andrea Cyr, Director Real Property, DFO</li><li>▪ George Fenn, Central &amp; Arctic Region, DFO</li><li>▪ Diane Orange, Assistant Deputy Minister, Human Resources and Corporate Services, DFO</li><li>▪ Rodney Watson, Project Manager Nanisivik Naval Facility, DND</li><li>▪ Laura D’Costa, Project Officer Contaminated Sites, DND</li><li>▪ Ranjeet Gupta, Director Environmental Engineering, DND</li><li>▪ David Knight, DND</li><li>▪ Louis LeMay, Technical Specialist Project Management, Defence Construction Canada</li><li>▪ Heather Jones, Health Canada</li><li>▪ Johan Skoglund, Group Manager Environment, Nyrstar</li><li>▪ Arlene Laudrum, Principal Consultant, SRK Consulting</li><li>▪ Doug Bright, Business Leader Environmental Risk Assessment, Hemmera</li></ul>		

Concerns and Responses	<p>At the initiative of Canzinc, three telephone conferences were held on October 17, October 24 and November 1. The purpose of this dialogue was to understand the DND's construction plans for the Nanisivik Naval Facility, discuss potential land use conflicts with respect to the ongoing soil remediation and the DND's construction plans, and to obtain the DND's and DFO's feedback on alternative soil remediation strategies that may alleviate potential land use conflicts.</p> <p>The remediation approach described in Appendix J and for which Canzinc is seeking approval was presented to the DFO and DND. The following feedback was received:</p> <ul style="list-style-type: none"> <li>• The DFO expressed support for the proposed remediation approach.</li> <li>• The DND requested that an option analysis be included in Canzinc's Licence application to evaluate all feasible options for management of the contaminated soil. <ul style="list-style-type: none"> <li>➤ Response: An option analysis is included in Appendix J.</li> </ul> </li> </ul>
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Given the consultation meetings already undertaken by Canzinc (as described above) and that these meetings did not identify any significant stakeholder concerns, Canzinc requests that any public hearings being required by the Board as part of the Licence application process be conducted in writing.

## 21. SECURITY INFORMATION

*Does the proposed amendment change the financial security assessment?*

☐ Yes ☒ No

*Does the proposed amendment change the estimate of the total financial security for final reclamation?*

☐ Yes ☒ No

Canzinc maintains a detailed model for estimation of environmental liabilities at Nanisivik. The model utilises unit rates and other cost data sourced from the contractors, consultants and other external providers involved in the on-going reclamation of the former Nanisivik mine site. Based on this model, outstanding costs associated with the remediation of the dock area and post-closure monitoring for water quality and geotechnical stability are estimated at approximately \$2 million. While a significant amount of reclamation work has been completed in terms of decommissioning of the tank farm and soil remediation, due to the increase in the amount of soil requiring remediation in addition to overall cost escalations the cost estimate remains at the same level at that predicted in the application for the existing Water Licence.

*Provide an estimate of the total financial security for final reclamation equal to the total outstanding reclamation liability for land and water combined sufficient to cover the highest liability over the life of the undertaking. Estimates of reclamation costs must be based on the cost of having the necessary reclamation work done by a third party contractor if the operator defaults. The estimate must also include contingency factors appropriate to the particular work to be undertaken. Identify any changes in the financial security assessment resulting from the proposed amendment.*

*Where applicable, the financial security assessment should be prepared in a manner consistent with the principals respecting mine site reclamation and implementation found in the Mine Site Reclamation Policy for Nunavut, Indian and Northern Affairs Canada, 2002.*

## **22. FINANCIAL INFORMATION**

*Is the statement of financial security the same as that considered in the existing water licence?*

☒ Yes ☐ No

*Provide an updated statement of financial security.*

A copy of the irrevocable standby letter of credit supplied as financial security under the current Water Licence is provided in Appendix M.

*If the applicant is a business entity please answer the questions below:*

*Is the list of the officers of the company the same as those considered in the existing water licence?*

☐ Yes ☒ No

*Provide a list of the officers of the company.*

Please refer to Appendix C for information about the Directors of Canzinco Ltd.

Please refer to Appendix N for Appointment of Officers for Canzinco Ltd. Only one officer has been appointed for Canzinco Ltd.

*Is the Certificate of Incorporation or evidence of registration of the company name the same?*

☒ Yes ☐ No

A copy of the Certificate of Incorporation for Canzinco is provided in Appendix O.

## **23. STUDIES UNDERTAKEN TO DATE**

*List and attach updated studies, reports, research etc.*

Studies and reports relevant to this Water Licence amendment application are provided in the following Appendices:

- Appendix G – Geotechnical Monitoring Schedule 2014-2018
- Appendix H – Water Quality Monitoring Schedule 2014-2018
- Appendix I – Contaminated Soil Remediation Progress
- Appendix J – Petroleum Hydrocarbon Contaminated Soils Risk-Based Remedial Options Analysis

*Provide a compliance assessment and status report including a response to any inspector's reports. The licensee must contact the NWB for licence specific direction in completing the assessment and report.*

A Compliance Assessment and Status Report is provided in Appendix P.

*If in non-compliance, a licence may not be issued until compliance is achieved. If in non-compliance, attach*

*plans/reports for consideration. Application will not be processed if significant issues of non-compliance exist.*

## 24. PROPOSED TIME SCHEDULE

*When are proposed amendments scheduled to be undertaken:* 2014 to 2019.

*Does the proposed amendment change the time schedule considered in the existing licence for any phase of development?*

☒ Yes ☐ No

*Indicate the start and completion dates for each applicable phase of development (construction, operation, closure, and post closure). Identify proposed changes.*

### Construction

Proposed Start Date:     N/A     Proposed Completion Date:                       
(month/year) (month/year)

### Operation

Proposed Start Date:     N/A     Proposed Completion Date:                       
(month/year) (month/year)

### Closure

Proposed Start Date:     2014     Proposed Completion Date:     2019      
(month/year) (month/year)

### Post - Closure

Proposed Start Date:     2014     Proposed Completion Date:     2019      
(month/year) (month/year)

*For each applicable phase of development indicate which season(s) activities occur.*

### Construction

☐ Winter ☐ Spring ☐ Summer ☐ Fall ☐ All season

### Operation

☐ Winter ☐ Spring ☐ Summer ☐ Fall ☐ All season

### Closure

☐ Winter ☐ Spring ☒ Summer ☐ Fall ☐ All season

### Post - Closure

☐ Winter ☐ Spring ☒ Summer ☐ Fall ☐ All season

## 25. PROPOSED TERM OF LICENCE

*On what date does the existing licence expire?* March 31, 2014

*Is the Licensee applying for a combined renewal and amendment of the existing licence?*

☒ Yes ☐ No

*If Yes, indicate the proposed term of the renewal (maximum of 25 years):* 5 years

*Requested date of renewal issuance:* April 1, 2014 *Requested Expiry Date:* March 31, 2019

(The requested date of renewal issuance must be at least three (3) months from the date of application for a type B water licence and at least one (1) year from the date of application for a type A water licence, to allow for processing of the water licence application. These timeframes are approximate and do not account for the time to complete any pre-licensing land use planning or development impact requirements, time for the applicant to prepare and submit a water licence application in accordance with any project specific guidelines issued by the NWB, or the time for the applicant to respond to requests for additional information. See the NWB's *Guide 5: Processing Water Licence Applications* for more information)

## 26. ANNUAL REPORTING

*Will the proposed amendment change the content of annual reports or the annual report template?*

☐ Yes ☒ No

## 27. CHECKLIST

The following must be included with the application for Amendment for the water licensing process to begin.

Completed Application for Water Licence Amendment form.

☒ Yes ☐ No If no, date expected \_\_\_\_\_

Information addressing Supplement Information Guideline (SIG), where applicable (see Block 11)

☒ Yes ☐ No If no, date expected \_\_\_\_\_

Compliance Assessment / Status Report (see Block 23).

☒ Yes ☐ No If no, date expected \_\_\_\_\_

Indication of Renewal Requirement (see Block 25)

☒ Yes ☐ No If no, date expected \_\_\_\_\_

English Summary of Amendment Application.

☒ Yes ☐ No If no, date expected \_\_\_\_\_

Inuktitut and/or Inuinnaqtun Summary of Amendment Application.

☒ Yes ☐ No If no, date expected \_\_\_\_\_

Application fee of \$30.00 CDN (Payee Receiver General for Canada).

☒ Yes ☐ No If no, date expected \_\_\_\_\_

Water Use Fee Deposit of \$30.00 CDN (Payee Receiver General for Canada). The actual water use fee will be calculated by the NWB based upon the amount of water authorized for use in accordance with the Regulations at the time of issuance of the licence.

☒ Yes ☐ No If no, date expected \_\_\_\_\_

**28. SIGNATURE**

Johan Skoglund  
Name (Print)

Group Manager Environment  
Title (Print)

Johan Skoglund  
Signature

13 Nov 2013  
Date