Ministre des Affaires indiennes et
du Nord canadien et interlocuteur fédéral
auprès des Métis et des Indiens non inscrits

Minister of Indian Affairs and
Northern Development and Federal Interlocutor
for Métis and Non-Status Indians

Ottawa, Canada K1A 0H4

MAI MAY 27 2009

Mr. Thomas Kabloona
Chair
Nunavut Water Board
PO Box 119
GJOA HAVEN NU X0B 1J0

Dear Mr. Kabloona:

Thank you for your letter of April 3, 2009, conveying the Nunavut Water Licence Number 1AR-NAN0914 for the Nanisivik Mine and the Nunavut Water Board's Reasons for Decision. I appreciate the work of the Nunavut Water Board in preparing this water licence amendment.

I have approved this Water Licence effective immediately. A signed copy is enclosed. A copy of this letter is being sent to the mine's owner to inform them of my approval as required by Section 56 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act.*

I would like to thank the Nunavut Water Board again for their diligence in the review and preparation of this water licence amendment.

Sincerely,

Chuck Strahl

Encl.

Canada

WATER LICENCE NO: 1AR-NAN0914

LICENCE NO: 1AR-NAN0914

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NUNAVUT WATER BOARD

WATER LICENCE

Pursuant to the Nunavut Waters and Nunavut Surface Rights Tribunal Act and the Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada, the Nunavut Water Board, hereinafter referred to as the Board, hereby grants to

CANZINCO LTD, A WHOLLY-OWNED SUBSIDARY OF BREAKWATER RESOURCES LTD.

(Licensee)

95 WELLINGTON STREET WEST, SUITE 950
TORONTO, ONTARIO
M5J 2N7

(Mailing Address)

hereinafter called the Licensee, the right to alter, divert or otherwise use water or dispose of waste for a period subject to restrictions and conditions contained within this Licence:

Licence Number/Type:	1AR-NAN0914 Type "A"
Water Management Area:	NUNAVUT 05
Location:	NANISIVIK MINE QIKIQTANI REGION, NUNAVUT
Classification:	INDUSTRIAL
Purpose:	RECLAMATION AND CLOSURE ACTIVITIES AND POST CLOSURE MONITORING
Quantity of Water use not to Exceed:	ONE HUNDRED (100) CUBIC METRES PER DAY
Date of Licence Issuance:	APRIL 1, 2009
Expiry of Licence:	MARCH 31, 2014

This Licence, issued and recorded at Iqaluit, Nunavut, includes and is subject to the annexed conditions.

Thomas Kabloona,
Nunavut Water Board
Chair

APPROVED BY:

Minister of Indian and Northern Affairs Canada

DATE LICENCE APPROVED:

PART A: SCOPE, DEFINITIONS AND ENFORCEMENT

1. SCOPE

a. This Licence authorizes CanZinco Ltd. ("Licensee") to conduct closure and reclamation activities and post-closure monitoring, associated with the Industrial undertakings at the Nanisivik Mine in the Qikiqtani Region of Nunavut, (73°02' N, 84°32' W) as follows:

Post-closure monitoring commencing in 2009 and continuing for a period of five years unless otherwise approved by the Board, including;

i. Water quality monitoring;
ii. Geotechnical monitoring;
iii. Inspection and maintenance of engineered structures and earthworks;
iv. Closure and reclamation of the Fuel Tank Farm and associated hydrocarbon contaminated soils; and
v. Completion of any further reclamation and closure activities approved by the Board in writing.

b. This Licence is issued subject to conditions contained herein with respect to the taking of Water and the depositing of Waste of any type in any Waters or in any place under any conditions where such Waste or any other Waste that results from the deposits of such Waste may enter any Waters. Whenever new Regulations are made or existing Regulations are amended by the Governor in Council under the Act, or other statutes imposing more stringent conditions relating to the quantity, type or manner under which any such Waste may be so deposited, this Licence shall be deemed to be subject to such requirements.

c. Compliance with the terms and conditions of this Licence does not absolve the Licensee from responsibility for compliance with all applicable legislation, guidelines and directives.

2. DEFINITIONS

The Licensee shall refer to Schedule A for definitions of terms used in this Licence.

3. ENFORCEMENT

a. Failure to comply with this Licence will be a violation of the Act, subjecting the Licensee to the enforcement measures and the penalties provided for in the Act.

b. All inspection and enforcement services regarding this Licence will be provided by Inspectors appointed under the Act.

c. For the purpose of enforcing this Licence and with respect to the use of Water and Deposit or Discharge of Waste by the Licensee, Inspectors appointed under the Act, hold all powers, privileges and protections that are conferred upon them by the Act or by other applicable law.

PART B: GENERAL CONDITIONS

1. The amount of Water use fees shall be determined in accordance with section 9(b) of the *Regulations.*

2. Payment of fees shall be made in accordance with section 9(6)(b) of the *Regulations.*

3. The Licensee shall file an Annual Report with the Board no later than March 31 in the year following the calendar year being reported. The Annual Report shall be developed in accordance with Schedule B.

4. Compliance dates specified in the Licence may be modified at the discretion of the Chief Executive Officer.

5. The Licensee shall ensure a copy of this Licence, all records, books of account, or other documents are maintained at any place in Canada for a period of not less than five years from the effective date of this licence.

6. Any communication with respect to this Licence shall be made in writing to the attention of:

Manager of Licensing
Nunavut Water Board
P. O. Box 119
Gjoa Haven, NU X0B 1J0
Telephone: (867) 360-6338
Fax: (867) 360-6369
Email: licensing@nunavutwaterboard.org

7. Any notice made to an Inspector shall be made in writing to the attention of:

Water Resources Officer
Nunavut District, Nunavut Region
P.O. Box 100
Iqaluit, NU X0A 0H0
Telephone: (867) 975-4295
Fax: (867) 979-6445

8. The Licensee shall submit one (1) paper copy and one (1) electronic copy of all reports, studies, and plans to the Board or as otherwise requested by the Board. Reports or studies submitted to the Board by the Licensee shall include an executive summary in English and

Inuktitut.

9. The Licensee shall ensure that any document(s) or correspondence submitted by the Licensee to the Board is received by the Manager of Licensing.

10. The Licensee shall install and maintain signs that identify Water Supply Facilities, and Waste Disposal Facilities. The signs shall be posted in English and Inuktitut.

11. The Licensee shall, for all plans submitted under this Licence, include a proposed timetable for implementation. Plans submitted cannot be undertaken without subsequent written Board approval and direction. The Board may alter or modify a plan if necessary to achieve the legislative objectives and will notify the Licensee in writing of acceptance, rejection or alteration of the plan.

12. In the event that a plan is not found acceptable to the Board, the Licensee shall provide a revised version to the Board for review within thirty (30) days of notification by the Board.

13. Every plan to be carried out pursuant to the terms and conditions of this Licence shall, once approved become a part of this Licence, and any additional terms and conditions imposed upon approval of a plan by the Board become part of this Licence. All terms and conditions of the Licence shall be contemplated in the development of a plan where appropriate.

14. The Licensee shall review the plans and manuals referred to in this Licence as required by changes in operation, site conditions, monitoring and/or technology and modify the plans and manuals to reflect these changes. Revisions to plans and manuals are to be submitted as an Addendum with the Annual Report required in Part B, Item 3, and include a complete list of revisions detailing where significant content changes have been made.

15. Licence is assignable as provided in section 44 of the Act.

16. The expiry or cancellation of this Licence does not relieve the Licensee from any obligation imposed by the Licence as provided in section 45 of the Act.

PART C: CONDITIONS APPLYING TO SECURITY

1. The Licensee shall furnish and maintain security with the Minister, in the amount of $2.0 million dollars, in the form that is satisfactory to the Minister.

2. The Licensee shall furnish and maintain such further or other amounts as may be required by the Board, based on updated annual estimates of current mine reclamation liability.

3. The Licensee may submit to the Board for approval in writing, a request for a reduction to the amount of security. The submission shall include supporting evidence to justify the request.

4. Subject to Part C, Item 2 and Part C, Item 3, the security referred to in Part C, Item 1 shall

be maintained until such time as it is fully or in part refunded by the Minister pursuant to sub section 76(5) of the Act. This clause shall survive the expiry of this Licence or renewals thereof and until full and final reclamation has been completed to the satisfaction of the Minister.

PART D: CONDITIONS APPLYING TO CONSTRUCTION

1. The Licensee shall prevent any chemicals, fuel or wastes associated with the undertaking from entering any water body.

2. The Licensee shall minimize disturbance to terrain, permafrost and drainage during movement of contractor's equipment and personnel around the site during construction activities.

3. The Licensee shall not store material on the surface of frozen streams or lakes except what is for immediate use.

4. The Licensee shall locate equipment storage areas on gravel, sand or other durable land, a distance of at least thirty (30) metres above the ordinary high water mark of any water body in order to minimize impacts on surface drainage and water quality.

5. The Licensee shall undertake necessary corrective measures to mitigate impacts on surface drainage resulting from the Licensee's activities.

6. The Licensee shall limit any in-stream activity to low water periods. In-stream activity is prohibited during periods when fish migration may be expected.

7. Prior to the construction of any dams, dykes or structures intended to contain, withhold, divert or retain Water or Wastes, final design and construction drawings signed and stamped by an Engineer shall be submitted to the Board, for approval in writing.

8. The construction of engineered earthworks shall be supervised and field checked by a qualified Engineer. Construction records shall be maintained and made available at the request of the Board.

9. The Licensee shall submit a Construction Summary Report, to the Board for review, within ninety (90) days following completion of all new structures designed to contain, withhold divert or retain Water or Wastes. The Report shall be prepared by a qualified Engineer(s) in accordance with Schedule D, Item 1.

10. The Licensee shall use fill material for construction from an approved source, which has been demonstrated not to produce Acid Rock Drainage and to be non-Metal Leaching.

11. The Licensee shall implement sediment and erosion control measures prior to and during Construction and Operations where necessary, to prevent entry of sediment into Water.

12. The Licensee shall inspect daily all construction activities for signs of erosion.

13. The Licensee shall minimize disturbance to terrain, permafrost and drainage during movement of the Licensee's and its contractor's equipment and personnel around the site during construction activities.

PART E: CONDITIONS APPLYING TO WATER USE AND MANAGEMENT

1. The Licensee shall obtain all fresh Water for domestic use from East Twin Lake, and Water use for the purposes of mitigation may be obtained from East Twin Lake, West Twin Creek and/or Chris Creek, or as otherwise approved by the Board in writing.

2. The total volume of fresh Water for all uses shall not exceed one-hundred (100) cubic metres per day.

3. The Licensee shall equip all Water intake hoses with a screen of an appropriate mesh size to ensure that fish are not entrained and shall withdraw Water at a rate such that fish do not become impinged on the screen.

4. Streams cannot be used as a water source unless authorized and approved by the Board in advance in writing.

5. If the Licensee requires water in sufficient volume that the source water body may be drawn down the Licensee shall, at least thirty (30) days prior to commencement of use of water, submit to the Board for approval in writing, the following: volume required, hydrological overview of the water body, details of impacts, and proposed mitigation measures.

6. The Licensee shall not remove any material from below the ordinary high water mark of any water body unless authorized.

7. The Licensee shall implement measures to prevent the generation and deposition of dust and/or sediment into Water arising from road use.

PART F: CONDITIONS APPLYING TO WASTE DISPOSAL AND MANAGEMENT

1. Effluent being discharged from the West Twin Disposal Area at monitoring station 159-4 shall be directed to Twin Lakes Creek and not exceed the following Effluent quality limits:

Substance	Monthly Mean	Composite Sample	Grab Sample
	Maximum Authorized Concentration (mg/L)	Maximum Authorized Concentration (mg/L)	Maximum Authorized Concentration (mg/L)
Total Arsenic (As)	0.25	0.375	0.50

Substance	Monthly Mean	Composite Sample	Grab Sample
	Maximum Authorized Concentration (mg/L)	Maximum Authorized Concentration (mg/L)	Maximum Authorized Concentration (mg/L)
Total Copper (Cu)	0.10	0.15	0.20
Total Lead (Pb)	0.10	0.15	0.20
Total Nickel (Ni)	0.50	0.75	1.00
Total Zinc (Zn)	0.25	0.375	0.50
Total Suspended Solids (TSS)	15.00	22.50	30.00
Total Radium 226 (^{226}Ra)	0.37 Bq/L	0.74 Bq/L	1.11 Bq/L
Total Cadmium (Cd)	0.005	0.008	0.01
pH	6.0-9.5		

2. Where a visible sheen of Oil and Grease has been observed under Part I, Item 2, the Maximum Authorized Concentration in a Grab Sample shall not exceed 30 mg/L.

3. The Licensee shall remove from the project site, all hazardous Wastes generated through the course of the undertaking, for disposal at an approved hazardous waste disposal facility.

4. The Licensee shall maintain records of all Waste backhauled.

PART G: CONDITIONS APPLYING TO MODIFICATIONS

1. The Licensee may, without written consent from the Board, carry out Modifications provided that such Modifications are consistent with the terms of this Licence and the following requirements are met:

   a. The Licensee has notified the Board in writing of such proposed Modifications at least sixty (60) days prior to beginning the Modifications to include requirements of Part G, Item 3;
   b. Such Modifications do not place the Licensee in contravention of the Licence or the Act;
   c. Such Modifications are consistent with the NIRB Screening Decision;
   d. The Board has not, within sixty (60) days following notification of the proposed Modifications, informed the Licensee that review of the proposal will require more than sixty (60) days; and
   e. The Board has not rejected the proposed Modifications.

2. Modifications for which any of the conditions referred to in Part G, Item 1 have not been met can be carried out only upon approval from the Board in writing.

3. Applications for modifications shall contain:

a. A description of the facilities and/or works to be constructed;
b. The proposed location of the structure(s);
c. Identification of any potential impacts to the receiving environment;
d. A description of any monitoring required, including sampling locations, parameters measured and frequencies of sampling;
e. Schedule for construction;
f. Drawings of engineered structures stamped by a Professional Engineer; and
g. Proposed sediment and erosion control measures.

4. The Licensee shall provide as-built plans and drawings of the Modifications referred to in this Licence within ninety (90) days of completion of the Modification. These plans and drawings shall be stamped by an Engineer.

PART H: CONDITIONS APPLYING TO EMERGENCY RESPONSE AND SPILL CONTINGENCY PLANNING

1. The Licensee shall prevent any chemicals, petroleum products or unauthorized Wastes associated with the project from entering Water.

2. The Licensee shall provide secondary containment for fuel and chemical storage as required by applicable standards and acceptable industry practice.

3. The Licensee shall prevent any chemicals, petroleum products or Wastes associated with the project from entering into Water.

4. All sumps and fuel caches shall be located at a distance of at least thirty (30) metres from the ordinary high water mark of any adjacent water body and inspected on a regular basis.

5. Licensee shall ensure that any equipment maintenance and servicing be conducted only in designated areas and shall implement special procedures (such as the use of drip pans) to manage motor fluids and other waste and contain potential spills.

6. If, during the period of this Licence, an unauthorized Discharge of Waste and or Effluent occurs, or if such Discharge is foreseeable, the Licensee shall:

   a. Employ as required, Emergency Response and Spill Contingency measures;
   b. Report the incident immediately via the 24-Hour Spill Reporting Line (867) 920-8130 and to the Inspector at (867) 975-4295; and
   c. For each discharge occurrence, submit a detailed report to the Inspector, no later than thirty (30) days after initially reporting the event, which includes the reference spill report number and a summary of information provided during initial reporting, the final estimated amount and type of spilled product, the GPS location of the spill, and the measures taken to contain, clean up and restore the spill site.

PART I: CONDITIONS APPLYING TO THE MONITORING PROGRAM

1. The Licensee shall undertake the Monitoring Program as provided in Tables 1, 2, and 3 of Schedule I.

2. If a visible sheen of Oil and Grease is present upon inspection at all sampling locations, during each sampling date, the Licensee shall obtain additional samples to be analysed for Oil and Grease to comply with Part F, Item 2.

3. The Licensee shall confirm the locations and GPS coordinates for all monitoring stations referred to in Schedule I with an Inspector.

4. The Licensee shall install and maintain signs that identify the monitoring stations. The signs shall be posted in English and Inuktitut.

5. The Licensee shall undertake a geotechnical inspection, to be carried out annually by a Geotechnical Engineer, during the months of July, August or September and reported as set out in Part I, Item 6. The inspection shall be conducted in accordance with the *Canadian Dam Safety Guidelines,* where applicable and be consistent with the "2008 Annual Geotechnical Inspection" (BGC Engineering Inc., January 30, 2009), taking into account all major earthworks and any changes to the project.

6. The Licensee shall submit to the Board, within the Annual Report required by Part B, Item 3, a report of the Geotechnical Engineer's Inspection carried out under Part I, Item 5. The Report shall include a cover letter from the Licensee, outlining an implementation plan to address the recommendations of the Geotechnical Engineer.

7. The Licensee shall submit to the Board, within the Annual Report required by Part B, Item 3, a detailed "Annual Water Quality Review" which includes, analysis of results and comparison to regulatory standards, approved plans, and demonstration of stability for termination of post-closure monitoring program where merited.

8. The Licensee shall submit to the Board for approval in writing, within three (3) months of issuance of the Licence, a "Comprehensive Contingency Plan" to include:

    a. Consolidation of contingency measures as provided in the Appendices to the 2004 Reclamation Plan and Closure Plan(s);
    b. Levels established and the methodology used in the establishment of contingency levels for water quality monitoring parameters and the geotechnical monitoring program, must be established whereby defined abatement and mitigation actions would be undertaken for any exceedance of such levels or criteria, taking into account historical background conditions;
    c. Mitigation and monitoring that addresses any environmental issues that may develop during reclamation of the Main Fuel Tank Farm; and
    d. Reporting requirements.

9. All sampling, sample preservation and analyses shall be conducted in accordance with the methods prescribed in the current edition of "*Standard Methods for the Examination of Water and Wastewater*" or by other such methods approved by an Analyst.

10. All analyses shall be performed in an accredited laboratory according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.

11. The Licensee shall submit a revised "Quality Assurance/ Quality Control (QA/QC) Plan". The QA/QC Plan shall be modified to include up to date sampling methods to all applicable standards, acceptable to an accredited laboratory as required by Part I, Item 9 and Part I, Item 10. The Plan shall include a covering letter from the accredited laboratory confirming acceptance of the Plan for analyses to be performed under this Licence.

12. The Monitoring Program may be modified, without a public hearing, at the discretion of the Chief Executive Officer. Requests for changes to the Program must be forwarded to the NWB in writing and include a comprehensive trend and comparative analysis to previously collected data, including background monitoring data for all sample parameters and locations, and provide a rationale acceptable to the NWB to support the request.

PART J: CONDITIONS APPLYING TO ABANDONMENT, RECLAMATION AND CLOSURE

1. 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 the monitoring requirements to confirm objectives, or as subsequently revised to incorporate design changes and adaptive engineering required and implemented during Construction and on the basis of actual site conditions and monitoring results over the implementation period or as otherwise required by this Licence. The plan included:

    a. Nanisivik Mine 2004 Reclamation Plan and Closure Plan;
    b. Engineering Design of Surface Reclamation Covers Report;
    c. Surface Cell and Test Cell Taliks Report;
    d. Quarry Development and Reclamation Plan;
    e. Detailed Design of the West Twin Dyke Spillway Report;
    f. Rock Piles and Open Pits Closure Plan;
    g. Closure Monitoring Plan;
    h. 2003 Phase III Environmental Site Assessment Report;
    i. Human Health and Ecological Risk Assessment Report;
    j. West Twin Disposal Area Closure Plan;
    k. Waste Disposal Plan; and
    l. Landfill Closure Plan.

2. The Licensee shall submit to the Board for approval in writing, by September 30, 2009, Abandonment and Reclamation Plan specific to the Fuel Tank Farm, prepared in accordance with the *Mine Site Reclamation Guidelines for the Northwest Territories, 2007*

and consistent with the INAC *Mine Site Reclamation Policy for Nunavut, 2002.* The Plan shall include:

a. Detailed engineering designs, stamped by an Engineer, for the closure (where applicable);
b. Details on the collection and disposal of hydrocarbon residues within all tanks and pipes;
c. The process of dismantling and disposing of all tanks, pipes, pumps and liners including final disposal location;
d. Description of the final desired landscape;
e. Discuss potential closure issues and liabilities including anticipated costs of all remediation activities;
f. Identify a plan to delineate, treat and dispose of hydrocarbon contaminated soils located within, beneath and adjacent to the Fuel Tank Farm;
g. Confirmation of Soil Quality Remediation Objectives (SQRO's) for the tank farm area;
h. Consideration for disposal of liquid and/or hazardous waste in accordance with Government of Nunavut requirements or guidelines;
i. Confirmatory soil analysis for Total Petroleum Hydrocarbons (TPH);
j. Decontamination and removal procedures for the tank and liner;
k. Spill Contingency measure in accordance with *Spill Contingency Planning and Reporting Regulations* developed under the *Environmental Protection Act (Nunavut)*; and
l. Detailed implementation schedule for all tasks and activities.

SCHEDULES

Schedule A – Scope, Definitions and Enforcement
Schedule B – General Conditions
Schedule D – Conditions Applying to Construction
Schedule I – Conditions Applying to the Monitoring Program

Schedule A – Scope, Definitions, and Enforcement

In this Licence: 1AR-NAN0913

"**Abandonment**" means the permanent dismantlement of a facility so it is permanently incapable of its intended use. This includes the removal of associated equipment and structures;

"**Act**" means the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*;

"**Acid Rock Drainage (ARD)**" means the production of acidic leachate, seepage or drainage from underground workings, open pits, ore piles, waste rock, construction rock that can lead to the release of metals to groundwater or surface water during the life of the Project and beyond closure;

"**Addendum**" means the supplemental text that is added to a full plan or report usually included at the end of the document and is not intended to require a full resubmission of the revised report. Also considered to be an appendix or supplement;

"**Amendment**" means a change to any terms and conditions of this Licence, through application to the NWB, requiring a change, addition, or deletion of specific terms and conditions of the Licence;

"**Analyst**" means an Analyst designated by the Minister under section 85 (1) of the *Act*;

"**Bi-weekly**" means, in the context of monitoring frequency, one sampling event occurring every two (2) weeks with a minimum of eight (8) days between sampling events;

"**Board**" means the Nunavut Water Board established under Article 13 of the *Nunavut Land Claims Agreement* and under section 14 of the Act;

"**Chief Executive Officer**" means the Chairman of the Nunavut Water Board;

"**Closure**" means when an Operator ceases operations at a facility without the intent to resume mining activities in the future;

"**Closure-period**" means the period immediately following the Reclamation Period where maintenance and monitoring is to be undertaken with respect to the monitoring program commencing in 2009;

"**Composite Sample**" means

(a) a quantity of effluent consisting of not less than three equal volumes proportionate to flow that have been collected at approximately equal time intervals over a sampling period of not less than seven hours and not more than 24 hours; or

(b) a quantity of effluent collected continuously at a constant rate or at a rate

proportionate to the rate of flow of the effluent over a sampling period of not less than seven hours and not more than 24 hours.

"**Construction**" means any activities undertaken to construct or build or remediate any component of, or associated with, the undertaking Nanisivik Mine post-closure;

"**Dam Safety Guidelines**" means the *Canadian Dam Association (CDA) Dam Safety Guidelines (DSG), January 1999* or subsequent approved editions;

"**Deposit**" means the placement of waste rock, tailings or other solids materials on land or in water;

"**Discharge**" means the release of any water or waste to the receiving environment;

"**Effluent**" means the liquid discharge from all site water management facilities;

"**Engineer**" means a professional engineer registered to practice in Nunavut in accordance with the *Engineering, Geological and Geophysical Act (Nunavut)* S.N.W.T. 1998, c.38, s.5;

"**Engineered Structure**" means any facility, which was designed and approved by a Professional Engineer registered with the Association of Professional Engineers, Geologists and Geophysicists of Nunavut;

"**Final Discharge Point**" in respect of an effluent, means an identifiable discharge point of a mine beyond which the Operator of the mine no longer exercises control over the quality of the effluent;

"Fuel Tank Farm" compromises the fifteen steel tanks of various sizes and all associated facilities including, piping, pumping equipment, containment structures, liners, and berms located in the dock area;

"**Geotechnical Engineer**" means a professional engineer registered with the Association of Professional Engineers, Geologist and Geophysicists of Nunavut and whose principal field of specialization with the engineering properties of earth materials in dealing with man-made structures and earthworks that will be built on a site. These can include shallow and deep foundations, retaining walls, dams, and embankments;

"**Grab Sample**" means an undiluted quantity of material collected at a particular time and place that may be representative of the total substance being sampled at the time and place it was collected;

"**Hazardous Materials**" means a contaminant which is a dangerous good that is no longer used for its original purpose and is intended for recycling, treatment, disposal or storage;

"**ICP Metals Scan**" means, for the purpose of the Licence, elements detected in an inductively coupled plasma (ICP) mass spectrometer. Metal parameters should be consistent with baseline data previously collected and include any other metals of concern or interest;

"**Inspector**" means an Inspector designated by the Minister under section 85 (1) of the Act;

"**Interim Closure and Reclamation Plan**" means a conceptual detailed plan on the reclamation of mine components which will not be closed until the end of the mining operations, and operational detail for components which are to be progressively reclaimed throughout the mine life;

"Landfill" consists of the facilities described in S. 5.4 as identified in the Nanisivik Mine Closure and Reclamation Plan (February 2002), Figure 1-2 titled "Mine General Arrangement";

"**Licence**" means this Type "A" Water Licence 1AR-NAN0913, issued by the Nunavut Water Board in accordance with the *Act*, to CanZinco Ltd. for the Nanisivik mine;

"**Licensee**" means to whom Licence 1AR-NAN0913 is issued to or assigned;

"**Maximum Authorized Monthly Mean Concentration**" means the average concentration of all samples collected over a thirty day period from the identical sampling location;

"**Metal Leaching**" means the mobilization of metals into solution under neutral, acidic or alkaline conditions;

"**Minister**" means the Minister of Indian and Northern Affairs Canada;

"**Modification**" means an alteration to a physical work that introduces a new structure or eliminates an existing structure and does not alter the purpose or function of the work;

"**Monitoring Program**" means the program to collect report and analyze, Water quality and geotechnical data used to assess impacts to the environment of an appurtenant undertaking;

"**Monthly**" means, in the context of monitoring frequency, one sampling event occurring every thirty (30) days with a minimum of twenty-one (21) days between sampling events;

"**Nunavut Land Claims Agreement**" (NLCA) means the "*Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada,*" including its preamble and schedules, and any amendments to that agreement made pursuant to it;

"**Operator**" means the person who operates, has control or custody of, or is in charge of a mine or recognized closed mine;

"**Project**" means the Nanisivik mine Project as outlined in the Final Environmental Impact Statement and supplemental information submitted by CanZinco Ltd. to the Nunavut Impact

Review Board (NIRB) as well as the Water Licence Application, Supporting Documents, and Technical Meeting Information Supplement documents submitted by the CanZinco Ltd. to the Nunavut Water Board throughout the regulatory process;

"**Quality Assurance / Quality Control (QA/QC)**" Quality Assurance means the system of activities designed to better ensure that quality control is done effectively; Quality Control means the use of established procedures to achieve standards of measurement for the three principle components of quality: precision, accuracy and reliability;

"**Quarterly**" means, in the context of monitoring frequency, one (1) sampling event occurring every three (3) months with a minimum of ninety (90) days between sampling events;

"**Reclamation**" means the process of returning the mine sites and affected areas to viable and, wherever practicable, self-sustaining ecosystems that are compatible with a healthy environment and with human activities;

"**Receiving Environment**" means both the aquatic and terrestrial environments that receive any discharge resulting from the Project;

"**Regulations**" means the *Northwest Territories Water Regulations SOR/93-303 8 June, 1993*;

"**Soil Quality Remediation Objectives (SQRO's)**" means the numerical concentration established as target value for soil quality remediation for contaminated sites as determined with guidance provided by the *Canadian Council of Ministers of the Environment (CCME);*

"**Surface Cell**" means the tailings, dike, shale and armour cover in the West Twin Disposal Area Surface Cell as detailed in the document *Surface Reclamation Covers As-Built Report; Nanisivik Mine, NU; Final Report.* BGC Engineering Inc. dated, April 14, 2008;

"**Test Cell**" means the tailings, shale and armour cover in the West Twin Disposal Area Test Cell as detailed in the document *Surface Reclamation Covers As-Built Report; Nanisivik Mine, NU; Final Report.* BGC Engineering Inc., dated, April 14, 2008;

"**Upper Dump Pond**" means the tailings, shale and armour cover in the West Twin Disposal Area Upper Dumb Pond as detailed in the document *Surface Reclamation Covers As-Built Report; Nanisivik Mine, NU; Final Report.* BGC Engineering Inc., dated, April 14, 2008;

"**Use**" means use as defined in section 4 of the Act;

"**Waste**" means waste as defined in section 4 of the Act;

"**Waste Rock**" means all unprocessed rock materials that are or were produced as a result of mining operations and have no current economical value;

"**Waste Water**" means the water generated by site activities or originates on-site that requires treatment or any other water management activity;

"**Water**" means water as defined in section 4 of the Act;

"**Water Licence Application**" means the amendment application and supporting information received September 26, 2006 and the renewal application dated February 15, 2008 with supporting documentation received by the NWB during the regulatory review to close of the public hearing record;

"**Weekly**" means, in the context of monitoring frequency, one (1) sampling event occurring every seven (7) days with a minimum of five (5) days between sampling events; and

"**West Twin Disposal Area**" means the facility consisting of the tailings impoundment area known as the Surface Cell, the structures designed to contain tailings, and West Twin Reservoir and Test Cell Area as identified in the West Twin Disposal Area Closure Plan, dated March 4, 2004".

The Annual Report referred to in Part B Item 3, shall include:

1. An executive summary of the Annual Report shall be provided in English and Inuktitut to summarize the activities and reclamation progress achieved under this Licence.

PART D – CONDITIONS APPLYING TO CONSTRUCTION

2. For the dikes and dams:
   a. As-built drawings of all mitigation works undertaken;
   b. Any changes in the design and/or as-built condition and respective consequences of any changes to safety, water balance and water quality; and
   c. A summary of maintenance work undertaken as a result of settlement or deformation of dikes and dams.

PART E – CONDITIONS APPLYING TO WATER USE AND MANAGEMENT

3. A summary of all water use activities in relation to the purpose of use and volumes required.

PART F – CONDITIONS APPLYING TO WASTE DISPOSAL AND MANAGEMENT

4. A summary of all general and hazardous Wastes generated through the course of the undertaking and their removal for disposal at an approved disposal facility.

PART G – CONDITIONS APPLYING TO MODIFICATIONS

5. A summary of all modifications and/or major maintenance work carried out on all water use and waste disposal related structures and facilities.

PART H – CONDITIONS APPLYING TO EMERGENCY RESPONSE AND SPILL CONTINGENCY PLANNING

6. A summary list and description of all unauthorized discharges including volumes, spill report line identification number and summaries of follow-up action taken as reported under Part H, Item 6(c).

PART I – CONDITIONS APPLYING TO THE MONITORING PROGRAM

7. Tabular summaries of all results of the Monitoring Program in accordance with Part I and Schedule I, Tables 2 and 3 including:

a. Water quality data; and
b. Data collected from instrumentation used to monitor earthworks and an interpretation of that data.

FOR DIKES, DAMS AND COVERS

8. An overview of methods and frequency used to monitor deformations, seepage and geothermal responses.

9. A comparison of measured versus predicted performance.

10. A discussion of any unanticipated observations including changes in risk and mitigation measures implemented to reduce risk.

11. Provide detailed map(s) of all geotechnical and water quality monitoring stations to accompany the reporting and interpretation of results.

12. The Geotechnical Engineer's Inspection Report required by Part I, Item 5, including the Annual Water Quality Review, required by Part I, Item 7.

PART J – CONDITIONS APPLYING TO ABANDONMENT, RECLAMATION AND CLOSURE

13. A summary of any closure and reclamation work undertaken on the Fuel Tank Farm, including photographic records of site conditions before and after completion of operations, and an outline of any work anticipated for the next year, including any changes to implementation and scheduling.

14. An updated estimate of the current reclamation liability, as required by Part J, Item 4, based on project development monitoring, results of reclamation research and any changes or modifications to the Appurtenant Undertaking. This estimate is to include a summary of expenditures during the year in relation to the ongoing mine site reclamation.

15. A summary of general remediation and reclamation work completed to date.

16. A revised implementation schedule.

GENERAL and PLANS/ REPORTS/ STUDIES

17. A summary of any studies requested by the Board that relate to Water Use, Waste disposal or Reclamation activities, and a brief description of any future studies planned.

18. Where applicable, submission of Addendums, with a revisions summary table giving an indication of the change, where they have been made and the date, for all plans, reports, and manuals.

19. An executive summary in English, Inuktitut of all plans, reports, or studies conducted under this Licence.

20. A summary of actions taken to address concerns or deficiencies listed in the inspection reports and/or compliance reports filed by an Inspector.

OTHER

21. A summary of public consultation and participation with local organizations and the residents of the nearby communities, including a schedule of upcoming community events and information sessions.

22. A detailed workplan of activities to be carried out in the subsequent year including dates of planned onsite inspection and sampling activities.

23. Any other details on Water use or Waste Disposal requested by the Board by November 1st of the year being reported.

Schedule D - Conditions Applying to Construction

1. The Construction Monitoring Report referred to in Part D, Item 9 shall include:

    a. A summary of construction activities including photographic records before, during and after construction;
    b. As-built drawings;
    c. Documentation of field decisions that deviate from original plans and any data used to support these decisions;
    d. Discussion of mitigation measures implemented during construction and effectiveness;
    e. Monitoring undertaken in accordance with Part D;
    f. Blast vibration monitoring for quarrying activity carried out in close proximity to fish bearing waters; and
    g. Monitoring for sediment release from construction areas.

Schedule I - Conditions Applying to General Monitoring: Tables 1, 2 and 3

TABLE 1 – Water Quality Monitoring Groups

Group	Included Parameters
1	Metals Analysis: Total cadmium, Total lead, Total zinc Major Cations: calcium, magnesium, sodium, potassium, ammonia, and the derived parameter hardness Major Anions chloride, sulphate, bicarbonate, carbonate, nitrate + nitrite, and the derived parameter alkalinity Total Suspended Solids (TSS) Field Parameters: specific conductivity, temperature pH Visual Oil and Grease (unless required by Part I, Item 2)
2	Total Petroleum Hydrocarbon (TPH) (when active layer deepest)
3	Oil and Grease
4	ICP Metal Scan (trace metal scan) to be, at a minimum, consistent with background water quality data previously collected including any other metals of concern or interest

TABLE 2 – Post-Closure (2009-2014) Active Water Quality Monitoring Program

Station	Description	Phase	Monitoring Parameters	Frequency[1]
Mine Site				
159-4	Final Discharge Point Effluent from the West Twin Disposal Area at decant structure	Post-closure	Group 1	Bi-weekly
			Group 4	Twice Annually
159-6	Twin Lakes Creek approximately 10 metres upstream from its mouth at high tide.	Post-closure	Group 1 Group 3	Bi-weekly
			Group 4	Twice Annually
159-10	Twin Lakes Creek, 10 metres upstream of the west tributary from Nanisivik townsite.	Post-closure	Group 1	Bi-weekly
159-14	Chris Creek, 50 metres upstream from the confluence of East Portal and Chris Creek.	Post-closure	Group 1	Monthly
159-15	Chris Creek, upstream from where Area 14 drainage enters Chris Creek (at the culvert).	Post-closure	Group 1	Monthly
159-17	Above the outflow of Chris Creek to Strathcona Sound	Post-closure	Group 1	Monthly
			Group 4	Twice Annually
159-20 (NML-23)	Outflow of East Twin Lake	Post-closure	Group 1	Bi-weekly
159-21 (NML-29)	Downstream of Landfill – East Drainage System	Post-closure	Group 1 Group 2 Group 3	Monthly
NML-30	Downstream of Landfill – West Drainage System	Post-closure	Group 1 Group 2 Group 3	Monthly

Note: [1] during periods of flow

TABLE 3 – Post –Closure Active Geotechnical Monitoring Program

Summary of Instrument Readings Requirements				
Instrument Information			Post Closure Monitoring	
Instrument Label	**Instrument Type**	**Location**	**Monitoring Frequency**	**No. of Monitoring Nodes**
West Twin Dike				
TC12	Thermocouple	Dike Face	Quarterly	2
TC13A	Thermocouple	Dike Face	Quarterly	5
TC31	Thermocouple	Dike Face	Quarterly	5
TC32	Thermocouple	Dike Face	Quarterly	7
TC33	Thermocouple	Dike Face	Quarterly	7
BGC03-33	Thermistor	Dike Crest	Quarterly	10
BGC03-34	Thermistor	Dike Crest	Quarterly	10
BGC05-09	Thermistor	Dike Crest	Quarterly/ Bi-weekly June 1-Sept 15	12
BGC05-15	Thermistor	Dike Crest	Quarterly/ Bi-weekly June 1-Sept 15	12
BGC03-17	Thermistor	Dike Crest	Quarterly/ Bi-weekly June 1-Sept 15	1
Surface Cell				
BGC02-03	Thermistor	Surface Cell	No longer functioning- discontinued	
BGC03-07	Thermistor	Surface Cell	Quarterly	9
BGC03-09	Thermistor	Surface Cell	Quarterly	10
BGC03-10	Thermistor	Surface Cell	Quarterly	8
BGC03-11	Thermistor	Surface Cell	Quarterly/ Bi-weekly June 1-Sept 15	10
BGC03-12	Vibrating Wire Piezometer	Surface Cell	Quarterly	1
BGC03-14	Vibrating Wire Piezometer	Surface Cell	Quarterly	1
BGC03-15	Thermistor	Surface Cell	Quarterly	10
BGC03-20	Thermistor	Surface Cell	Quarterly/ Bi-weekly June 1-Sept 15	10
BGC03-21	Thermistor	Surface Cell	Quarterly	10
BGC03-32	Vibrating Wire Piezometer	Surface Cell	Quarterly/ Bi-weekly June 1-Sept 15	1
BGC03-35	Vibrating Wire Piezometer	Surface Cell	Quarterly/ Bi-weekly June 1-Sept 15	1
BGC03-36	Thermocouple	Surface Cell	Quarterly	5
BGC03-37	Thermistor	Surface Cell	Quarterly/ Bi-weekly	9

Summary of Instrument Readings Requirements				
Instrument Information			Post Closure Monitoring	
Instrument Label	**Instrument Type**	**Location**	**Monitoring Frequency**	**No. of Monitoring Nodes**
			June 1-Sept 15	
BGC05-05	Thermistor	Surface Cell	Quarterly	12
BGC05-06	Vibrating Wire Piezometer	Surface Cell	Quarterly/ Bi-weekly June 1-Sept 15	1
BGC05-07	Vibrating Wire Piezometer	Surface Cell	Quarterly/ Bi-weekly June 1-Sept 15	1
BGC05-08	Contingency	Surface Cell	-	n/a
Surface Cell				
BGC05-10	Vibrating Wire Piezometer	Surface Cell	Quarterly/ Bi-weekly June 1-Sept 15	1
BGC05-11	Monitoring Well	Surface Cell	Once per summer	n/a
BGC05-12	Monitoring Well	Surface Cell	Once per summer	n/a
BGC05-13	Vibrating Wire Piezometer	Surface Cell	Quarterly/ Bi-weekly June 1-Sept 15	1
BGC05-14	Contingency	Surface Cell	-	n/a
BGC05-16	Contingency	Surface Cell	-	n/a
FG-1	Frost Gauge	Surface Cell	Bi-weekly June 1-Sept 15	n/a
FG-2	Frost Gauge	Surface Cell	Bi-weekly June 1-Sept 15	n/a
FG-3	Frost Gauge	Surface Cell	Bi-weekly June 1-Sept 15	n/a
FG-4	Frost Gauge	Surface Cell	Bi-weekly June 1-Sept 15	n/a
FG-5	Frost Gauge	Surface Cell	Bi-weekly June 1-Sept 15	n/a
FG-6	Frost Gauge		Bi-weekly June 1-Sept 15	n/a
Toe of West Twin Dike				
BGC03-18	Thermocouple	Toe of West Twin Dike	Quarterly	4
BGC03-19	Thermistor	Toe of West Twin Dike	Quarterly/ Bi-weekly June 1-Sept 15	8
BGC05-26	Thermistor	Toe of West Twin Dike	Quarterly/ Bi-weekly June 1-Sept 15	10
Test Cell				
BGC05-04	Thermistor	Test Cell	Quarterly/ Bi-weekly June 1-Sept 15	10
BGC05-18	Vibrating Wire Piezometer	Test Cell	Quarterly/ Bi-weekly	1

Summary of Instrument Readings Requirements				
Instrument Information			Post Closure Monitoring	
Instrument Label	**Instrument Type**	**Location**	**Monitoring Frequency**	**No. of Monitoring Nodes**
			June 1-Sept 15	
BGC05-19	Thermistor	Test Cell	Quarterly/ Bi-weekly June 1-Sept 15	12
BGC05-20	Vibrating Wire Piezometer	Test Cell	Quarterly/ Bi-weekly June 1-Sept 15	1
BGC05-21	Monitoring Well	Test Cell	Once per summer	n/a
BGC05-22	Vibrating Wire Piezometer	Test Cell	Quarterly/ Bi-weekly June 1-Sept 15	1
BGC05-23	Monitoring Well	Test Cell	Once per summer	n/a
BGC05-24	Vibrating Wire Piezometer	Test Cell	Quarterly/ Bi-weekly June 1-Sept 15	1
BGC05-25	Contingency	Test Cell	-	n/a
FG-7	Frost Gauge	Test Cell	Bi-weekly June 1-Sept 15	n/a
FG-8	Frost Gauge	Test Cell	Bi-weekly June 1-Sept 15	n/a
Test Cell Dike				
BGC02-09	Thermistor	Test Cell Dike	Quarterly	3
BGC03-22	Thermistor	Test Cell Dike	Quarterly	8
BGC05-29	Thermistor	Test Cell Dike	Quarterly/ Bi-weekly June 1-Sept 15	12
Toe of Test Cell Dike				
BGC05-27	Thermistor	Toe of Test Cell Dike	Quarterly/ Bi-weekly June 1-Sept 15	10
BGC05-28	Vibrating Wire Piezometer	Toe of Test Cell Dike	Quarterly/ Bi-weekly June 1-Sept 15	1
FG-9	Frost Gauge	Toe of Test Cell Dike	Bi-weekly June 1-Sept 15	n/a
FG-10	Frost Gauge	Toe of Test Cell Dike	Bi-weekly June 1-Sept 15	n/a
Oceanview Pit				
BGC05-01	Thermistor	Oceanview Pit	Quarterly/ Bi-weekly June 1-Sept 15	12
FG-16	Frost Gauge	Oceanview Pit	Bi-weekly June 1-Sept 15	n/a
East Open Pit				
BGC05-02	Thermistor	East Open Pit	Quarterly/ Bi-weekly June 1-Sept 15	12

Summary of Instrument Readings Requirements				
Instrument Information			Post Closure Monitoring	
Instrument Label	**Instrument Type**	**Location**	**Monitoring Frequency**	**No. of Monitoring Nodes**
BGC05-03	Thermistor	East Open Pit	Quarterly/ Bi-weekly June 1-Sept 15	12
FG-13	Frost Gauge	East Open Pit	Bi-weekly June 1-Sept 15	n/a
FG-14	Frost Gauge	East Open Pit	Bi-weekly June 1-Sept 15	n/a
Landfill				
BGC05-30	Thermistor	Landfill	Quarterly/ Bi-weekly June 1-Sept 15	10
FG-11	Frost Gauge	Landfill	Bi-weekly June 1-Sept 15	n/a
Area 14				
TC8	Thermocouple	Area 14	Quarterly	4
FG-15	Frost Gauge	Area 14	Bi-weekly June 1-Sept 15	n/a
Upper Dump Pond				
FG-17	Frost Gauge	Upper Dump Pond	Bi-weekly June 1-Sept 15	n/a

Notes:

1. Quarterly readings to be taken during December, Late April, Early July, and Late August.
2. Frost Gauges to be read weekly between June 1 and September 15.
3. Reproduced from document provided by BGC Engineering Inc. for CanZinco Ltd., a division of Breakwater Resources Ltd.