





ᓄᓇᑭᓯ ᐱᓚᓂᓂᓴᑭᓪ ᑲᓂᓴᑭᓪ/NUNAVUT IMPACT REVIEW BOARD/NUNAVUTMI KANOGILIVALIANIKOT ELITTOHAIYEOPLOTIK KATIMAYUIT

SCREENING DECISION

Date: May 23, 2001

Mr. Thomas Kudloo
Chairperson, Nunavut Water Board
Gjoa Haven, NT

Dear Mr. Kudloo:

**RE: Screening Decision of the Nunavut Impact Review Board (NIRB) on Application:
NIRB 01WR043 NWB NWB1NAN9702
Water Use and Waste Disposal Renewal for Nanisivik Mine**

Authority:

Section 12.4.4 of the Nunavut Land Claim Agreement states:

Upon receipt of a project proposal, NIRB shall screen the proposal and indicate to the Minister in writing that:

- a) the proposal may be processed without a review under Part 5 or 6; NIRB may recommend specific terms and conditions to be attached to any approval, reflecting the primary objectives set out in Section 12.2.5;
- b) the proposal requires review under Part 5 or 6; NIRB shall identify particular issues or concerns which should be considered in such a review;
- c) the proposal is insufficiently developed to permit proper screening, and should be returned to the proponent for clarification; or
- d) the potential adverse impacts of the proposal are so unacceptable that it should be modified or abandoned.

Primary Objectives:

The primary objectives of the Nunavut Land Claims Agreement is referenced in the screening section 12.4.4 (a) are set out in section 12.2.5 of the Land Claims Agreement. This section reads:

In carrying out its functions, the primary objectives of NIRB shall be at all times to protect and promote the existing and future well-being of the residents and communities of the Nunavut Settlement Area, and to protect the ecosystemic integrity of the Nunavut Settlement Area. NIRB shall take into account the well-being of the residents of Canada outside the Nunavut Settlement Area.

The Decision of the Board in this case is 12.4.4 (a) the proposal may be processed without a review under Part 5 or 6; NIRB may recommend specific terms and conditions to be attached to any approval, reflecting the primary objectives set out in Section 12.2.5;

Reasons for Decision:

NIRB's decision is based on specific considerations that reflect the primary objectives of the Land Claims Agreement. Our considerations in making this decision included:

- the impact of mining activities on the ecosystem;
- disposal of waste water in the tailings facility;
- acid rock generation and drainage
- impact to water quality, aquatic habitat and wildlife and fish populations from chemicals, drill waste/fluids, waste rock and potential fuel spills;
- storage and disposal of chemicals, fuel, garbage, sewage, and grey water, and impact of these on the ecosystem;
- the impact of noise from activities and their disturbance to wildlife;
- the movement of vehicles and equipment and the impact on wildlife and terrain;
- the impact of activities on archaeological sites or cultural landmarks in the area;
- clean up/restoration of the site upon abandonment; and
- letter of concern from the Department of Sustainable Development, Nunavut Government

Terms and Conditions:

- That the terms and conditions attached to this screening report will apply.

Waste & Water Management

1. The Lessee shall ensure that copies of all reports associated with operations at Nanisivik are submitted to NIRB, as well as, applicable authorizing agencies and Qikiqtani Inuit Association (QIA) Lands Department.
2. The Lessee shall monitor runoff and pit water quality at least twice during the open water season.

Waste Disposal

3. The Lessee shall ensure that the waste discharge area is of sufficient capacity to accommodate the volume of wastewater and any fines that are produced so that there will be no additional impacts.
4. The Lessee shall not discharge or deposit any refuse substances or other waste materials in any body of water, or on the banks thereof, which will impair the quality of the waters of the natural environment.
5. Any sumps or areas designated for waste disposal shall not be located within thirty-one (31) metres of the ordinary high water mark of any body of water, unless otherwise authorized.
6. The Lessee shall treat greywater and sewage according to the terms and conditions outlined in the NWB approval.
7. The Lessee shall incinerate all combustible and food wastes to eliminate potential for wildlife problems created by the attraction of wildlife to garbage.

8. The Lessee shall ensure that all non-combustible wastes generated through the course of the operation are backhauled and disposed of in an approved dumpsite.
9. The Lessee shall deposit all scrap metal, discarded machinery and parts, barrels and kegs, at an approved disposal site.
10. The Lessee shall not bury any metal wastes.
11. The Lessee shall dispose of all toxic or persistent substance in a manner approved by the NWB and the land use inspector.

Mining Operations

12. The Lessee shall not conduct any land based mining activities within thirty-one (31) metres of the normal high water mark of a water body.
13. The Lessee shall ensure that the release of total suspended solids in the receiving environment shall be in compliance with *Guidelines for Total Suspended Solids* contained in the *Canadian Council of Ministers for the Environment's (CCME) Canadian Water Quality Guidelines, Chapter 3 - Freshwater Aquatic Life* (i.e. 10mg/L for lakes with background level under 100mg/L, or 10% for those above 100mg/L).
14. The Lessee shall ensure that all drill cuttings are removed from ice surfaces.
15. The Lessee shall not use drilling muds or additives in connection with drill holes unless they are recirculated or contained such that they do not enter the water, or are certified non-toxic.
16. The Lessee shall ensure that any drill cuttings and waste water that cannot be re-circulated be disposed of in a properly constructed sump or an appropriate natural depression that does not drain into a waterbody.
17. The Lessee shall, where flowing water from bore holes is encountered, plug, the bore hole in such a manner as to permanently prevent any further outflow of water. If an artesian occurrence shall be reported to the Nunavut Water Board and Land Use Inspector within 48 hours.
18. The Lessee shall not detonate explosives within fifteen (15) metres of any body of water, which is not completely frozen to the bottom.

Quarrying

19. The Lessee shall slope the sides of the excavations and embankments except in solid rock to 2:1 (two horizontal to one vertical) unless otherwise approved in writing by the land use inspector.
20. The Lessee may only excavate and stockpile materials in areas designated.
21. The Lessee shall adopt such measures as required to control erosion by surface disturbance.
22. The Lessee shall leave a strip of undisturbed vegetation at least 100metres in width between clearing and public roads or navigable waterways unless otherwise approved in writing.

Road Construction

23. The Lessee shall scout proposed routes to select the best location for crossing streams and avoid terrain obstacles prior to the movement of any vehicle.

24. The Lessee shall ensure that stream crossings are located to minimize approach grades. Bank disturbance is to be avoided, and mechanized clearing should not be done immediately adjacent to any watercourse.
25. The Lessee shall remove all ice bridges prior to spring break-up or completion of the land use operation.
26. The Lessee shall not use any material other than water in the construction of ice bridges.
27. The Lessee shall not cut any stream bank.
28. The Lessee shall remove all snow fills from stream crossings prior to spring break up or the completion of the land use operation.
29. The Lessee shall not allow any ice bridge to hinder the flow of water of any stream.
30. The Lessee shall prepare the site in such a manner as to prevent rutting of the ground surface.
31. The Lessee shall not move any equipment or vehicles without prior testing the thickness of the ice to ensure the lake is in a state capable of fully supporting the equipment or vehicles.
32. The Lessee shall not move any equipment or vehicles unless the ground surface is in a state capable of fully supporting the equipment or vehicles without rutting or gouging.
33. The Lessee shall suspend overland travel of equipment or vehicles if rutting occurs.
34. The Lessee shall construct and maintain winter roads with a minimum of ten (10) centimetres of packed snow at all times during this land use operation.
35. The construction or disturbance of any stream/lake bed or banks of any definable watercourse is not permitted unless authorized by the Department of Fisheries and Oceans.
36. The Lessee shall ensure that the road alignment avoids known environmentally sensitive areas (denning, nesting etc.) by a minimum of 250 metres.
37. That the Lessee adopt a "wildlife has the right of way" policy to minimize road kills and undue stress on animals near, on or crossing the roadway.

Structures & Storage Facilities

38. The Lessee shall not erect structures or store material on the surface ice of lakes or streams.
39. The Lessee shall locate all structures and storage facilities on gravel, sand or other durable land.
40. The Lessee shall use existing housing and operational facilities.
41. The Lessee shall ensure that non-acid generating materials are used for the construction of roads and ore pads.
42. The Lessee shall complete leachate and acid generation tests on ore and waste rock in a manner approved by the NWB. All test results shall be submitted to NIRB.

Fuel and Chemical Storage

43. The Lessee shall ensure that fuel storage containers are not located within thirty-one (31) metres of the ordinary high water mark of any body of water.
44. The Lessee shall ensure that any chemicals, fuels or wastes associated with the project do not spread to the surrounding lands or enter into any water body.
45. The Lessee shall take all reasonable precautions to prevent the possibility of migration of spilled petroleum fuel or chemicals over the ground surface.

46. The Lessee shall have one extra fuel storage container on site equal to, or greater than, the size of the largest fuel container.
47. The Lessee shall construct an impermeable dyke around each stationary fuel container or group of stationary fuel containers where one container has the capacity exceeding 4,000 liters.
48. The Lessee shall have a spill contingency plan in place prior to commencement of the land use operation.
49. The Lessee shall examine all fuel and chemical storage containers for leaks daily. All leaks should be prepared immediately.
50. The Lessee shall immediately report all spills of petroleum and hazardous chemicals to the twenty four (24) hour spill report line at (867) 920-8130.

Environmental

51. The Lessee shall ensure that the land use area is kept clean and tidy at all times.
52. The Lessee shall prepare the site in such a manner as to prevent damage to the ground surface.
53. The Lessee shall be required to undertake any corrective measures in the event of any damage to the land or water as a result of the Lessee's operation.
54. The Lessee shall not use any equipment except for the type, size and number that is listed in the accepted application.
55. The Lessee shall not move any equipment or vehicles unless the ground surface is in a state capable of fully supporting the equipment or vehicles without rutting or gouging.
56. The Lessee shall suspend overland travel of equipment or vehicles if rutting occurs.

Wildlife

57. The Lessee shall ensure that there is no damage to wildlife habitat in conducting this operation.
58. The Lessee shall not feed wildlife.
59. The Lessee shall provide compensation to the HTO(s) for any Polar Bear defense kills.
60. The Lessee shall use the latest bear detection and deterrent techniques to minimize man-bear interactions. The Lessee is strongly urged to contact the Department of Sustainable Development (DSD) wildlife officers regarding safety in polar bear country literature and training.
61. The Licensee shall immediately report problem wildlife to Department of Sustainable Development wildlife officers.
62. The Lessee shall ensure that the drilling, blasting, quarrying and road construction avoid known environmentally sensitive areas (denning, nesting etc.) and wildlife activity by a minimum of 250 metres.
63. The Lessee shall not locate any operation so as to block or cause substantial diversion to migration of caribou.
64. The Lessee shall cease activities that may interfere with migration or calving, such as airborne geophysics surveys or movement of equipment, drilling activities until the caribou and their calves have vacated the area.

65. The Lessee shall ensure that aircraft pilots adhere to recommended flight altitudes of greater than 300 m above ground level as to not disturb wildlife. Raptor nesting sites and concentrations of nesting or molting waterfowl should be avoided by aircraft at all times.
66. The Lessee shall ensure compliance with Section 36 of the *Fisheries Act* which requires that no person shall deposit or permit the deposit of a deleterious substance on any type in water frequented by fish or in any place under any conditions where the deleterious substance may enter such a water body.
67. The harmful alteration, disruption or destruction of fish habitat is prohibited under Section 35 of the *Fisheries Act*. No construction or disturbance of any stream/lake bed or banks of any definable watercourse is permitted unless authorized by DFO.
68. The Lessee shall ensure that all water intake hoses are equipped with a screen with an appropriate mesh size to ensure that there is no entrapment of fish. Refer to the *Freshwater Intake End-of Pipe Fish Screen Guideline* (DFO 1995).
69. The Lessee shall not obstruct the movement of fish while conducting the land use operation.
70. That the Lessee remove any carcasses along the roadway to prevent attraction by scavengers, preventing further road kills.

Archaeological Sites

71. The Licensee shall follow all terms and conditions for the protection and restoration of archaeological resources as outlined by the Department of Culture, Language, Elders and Youths (CLEY).

Reclamation

72. The Lessee shall remove all scrap metal, discarded machinery and parts, barrels and kegs, buildings and building material upon abandonment.
73. The Lessee shall undertake ongoing restoration for any land or improvements, which are no longer, required for the Lessee's operation on the land.
74. The Lessee shall cap all drill holes and cut off any drill casings that remain above ground to ground level upon abandonment of the operation.
75. The Lessee shall complete all clean up and restoration of the lands used prior to the expiry date of the permit.

Monitoring

76. The Lessee shall monitor the impacts to wildlife by maintaining a log of wildlife observed (species, number, date, time, location observed) and their behavior (i.e. avoidance, segregation, disturbance/stress, alteration of migration patterns or movements by wildlife) and shall present these reports to NWMB, RWED and NIRB on a monthly basis.
77. The Lessee shall provide NIRB with all copies of reports, including the terms of reference, for the mitigation of dust.
78. The Lessee shall establish a monitoring program with the NWB in order to provide an on-going assessment of the tailings dam stability. This monitoring program should include, but

May-24-01 01:56P

P.02

2001-May-23 02:42pm From-NUNAVUTIMPACT REVIEW BOARD

+8679832594

T-938 P.003/004 F-576

not be limited to measuring the seepage flow rate, temperature, total suspended solids, permafrost levels by thermistors and slope stability.

79. The Lessee shall submit to the NWB and NIRB a summary report of activities undertaken and any abandonment and restoration of the site.

Other Recommendations

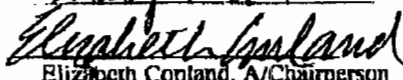
1. NIRB would like to encourage the proponent to hire local people and services, to the extent possible.
2. NIRB advises proponents to consult with local residents regarding their activities in the region, including Arctic Bay and the Qikiqtani Inuit Association (QIA).
3. Any amendment requests deemed by NIRB to be outside the original scope of the project will be considered a new project.
4. The Environmental Protection Branch (DE), Department of Fisheries and Oceans (DFO), Nunavut Impact Review Board (NIRB), and the Nunavut Water Board (NWB) should be advised of any material changes to plans or operating conditions associated with the project.

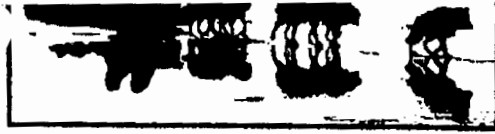
Validity of Land Claims Agreement

Section 2.12.2

Where there is any inconsistency or conflict between any federal, territorial and local government laws, and the Agreement, the Agreement shall prevail to the extent of the inconsistency or conflict.

Dated May 24/01 at Whale Cove, NU


Elizabeth Copland, A/Chairperson



ᓄᓇᑭᑦ ᐃᑦᑎᓕᓕᓂᑦᑭᑦ ᑲᑎᓚᐱᑦ/NUNAVUT IMPACT REVIEW BOARD/NUNAVUTMI KANOGILIVALIANIKOT ELITTOHAIYEOPLOTIK KATIMAYIIT

NUNAVUT IMPACT REVIEW BOARD SCREENING FORM

1. General File Information on Screening

NIRB #: CH 2043
(yy-xxxx)

Authorizing Agency #(s). NW BIA 119702
 permit or licence #

Project Title: Water Use and Waste Disposal
Title of Project

Proponent: CanZinc Ltd. / Nainivik mine
Company Applicant

Proponent's Address: PO Box 335
Nanisivik Mine
YDA 0X0
Full Address

Contractor: _____

 Company, persons doing the work if different from the proponent

 address and contact numbers

Proposed Dates of Activity: Start Date July 31/07 End Date July 31/07
(yyyy-mm-dd) (yyyy-mm-dd)

EA Starting Date: April 2, 2002
Date application accepted (yyyy-mm-dd)

Date Application Referred for Comments: April 10, 2002
(yyyy-mm-dd)

Deadline for Comments: May 8, 2002
(yy-mm-dd)

NIRB's EA Indication: 12.4.4 (α)

Date of Indication: May 04, 201
(mm-mm-dd)

Project Cancelled: Yes, Give Reason_____

Comments:

2. Authorizing Agencies

Authorizing Agency(ies): Kivalliq I.A., Kitikmeot I.A., QIA, NWB, NWMB, DIAND, DFO, DOE, NRI, RWED, Other: _____

Authorizing Agency Contact Person: Rita Becker
(office where project file is located, contact person, number)

Land Status: Inuit Owned _____ Crown ☒ Commissioner's ☒ Marine Areas _____

Type of Application: water licence
(e.g. water licence, land use permit, quarry permit, research permit, lease, reserve)

Type of Approval being sought: Renewal
(e.g. new, renewal, amendment, cancellation)

Other required approvals, permits or licences: _____
(e.g. water licence, land use permit, quarry permit, lease, reserve)

Present Authorizations (active): _____
(file number)

Previous Authorizations (inactive/expired): _____
(file number)

3. Project Location

Kivalliq _____ Kitikmeot _____ Baffin ☒

Land Use Planning Region: North Baffin
(e.g. West Kitikmeot, North Baffin, South Baffin, Kivalliq)

Geographic Place Name: Nanisivik
(nearest place name or geographic feature)

Local/Traditional Name: _____

National Topographic Sheet (NTS) Number: C 48/1 Scale: _____

Latitude/Longitude: 73° 03' N, 84° 35' W
(degrees, minutes seconds)

Drainage Region and Watershed: _____
(nearest creek, river or lake system)

Nearest Settlement: Nanisivik, Arctic Bay

Adjacent Settlement/Out-post camps: _____

Special Designation: NO
(Yes/No - e.g. Heritage River, Wildlife Reserve, Park)

Does the project have Nunavut transboundary implications? Yes _____ No ☒

If yes, what additional procedures/contacts are needed? _____

4. Project Description and Assessment

Physical Work, Activity(ies): Mining
 (drilling, construction, camp, research, water works, installation, modification, maintenance)

Multiple Activities: Yes X No

Project Category Code: Point Multiple Points Linear Area

Phase of Project: Mining
 (exploration, bulk sampling, development, operations, decommissioning, abandonment, restoration)

Project Description Summary (non-technical):

(duration of project, size of project, number of personnel on site, related physical activities, machinery used, fuels and chemical use and storage, associated infrastructure, methods of transportation, amount and source of resources needed eg. Gravel)

Attach Project Overview (English and Inuktitut)

Alternatives Considered:

(list all alternatives to the project and/or components of the project to avoid unnecessary amendments, (e.g. alternatives to location of ice road or camp logistics))

5. The Proponent's Public Consultation Process**Description of Proponent's Public Consultation Process**

communications have been carried to the
community through the Arctic Bay HTO

Did proponent make use of traditional knowledge? Yes ✓ No

Was information available in the community's preferred language? Yes ✓ No

In NIRB's opinion, was the proponent's public consultation adequate? Yes ✓ No

If no, explain why the proponent's consultation program was found deficient.

7. NIRB's Consultation Process

Date application referred for comments:

April 10, 2001

(yyyy-mm-dd)

Deadline for comments:

May 8, 2002

(yyyy-mm-dd)

Distribution List:

Contact Person:

Date comments received:

NUNAVUT:

☐ NTI
☐ QIA
☐ Kivalliq I.A.
☐ Kitikmeot I.A.
☒ NPC
☐ NWB
☐ NWMB
☐ RWO
☐ Inuit Heritage Trust
☐ Community(s)
Hamlet _____
HTO _____
Other? _____

April 16 101Michele Berto**FEDERAL:**

☒ DIAND
☒ DFO
☐ DOE
☐ Heritage Can.
☐ Natural Resources
☒ Other? (eg. Health
DOT, DND)

Paul Smith
Sordan DeGrootMay 7 101
May 8 101Rick McLeanApril 16 101**GOVERNMENT OF NUNAVUT:**

☐ Sustainable Dev.
☐ CGHT
☐ HSS
☒ CLEY
Other? _____

Doug StentonMay 2 101**TRANSBOUNDARY
PARTIES****OTHER PARTIES**

Identification of Project Activities and Environmental Effects

Identify all activities of the project under screening and their potential adverse environmental effects.

Project Activities

(✓ check all the items appropriate to this project)

- ☒ access road
 - ☐ winter
 - ☐ construction
 - ☐ abandonment/removal
 - ☐ modification e.g., widening
- ☒ automobile, aircraft or vessel movement
- ☒ blasting
- ☒ burning
- ☒ burying
- ☐ channelling
- ☐ construction
 - ☐ building
 - ☐ shed/warehouse
 - ☐ landing strip
- ☐ cut and fill
- ☒ removal of vegetation
- ☐ dams and impoundments
 - ☐ construction
 - ☐ abandonment/removal
 - ☐ modification
- ☐ ditch construction
- ☐ drainage alteration
- ☐ drilling other than geoscientific
- ☐ ecological surveys
- ☐ excavation
- ☒ explosive storage
- ☒ fuel storage
- ☒ garbage
 - ☒ disposal of hazardous waste
 - ☒ disposal of sewage or grey water
 - ☒ disposal of solid waste
- ☐ geoscientific sampling
 - ☐ trenching
 - ☐ diamond drill
 - ☐ borehole core sampling
 - ☐ bulk soil sampling
- ☐ quarry
- ☐ hydrological testing
- ☐ river/stream/lake crossing/badging
- ☐ site restoration
 - ☐ fertilization
 - ☐ grubbing
 - ☐ planting/seeding
 - ☐ scarification
 - ☐ spraying
 - ☐ recontouring
- ☒ soil testing
- ☒ topsoil, overburden or soil
 - ☐ fill
 - ☐ disposal
 - ☒ removal
 - ☒ storage
- ☒ tunnelling/underground
- ☒ other, explain mine
- ☐ possibility for accidents or malfunctions. Describe.
- ☐ effects of environment on project (e.g., flooding). Describe.

Project Effects

(✓ check all the items appropriate to this project)

Directly-related Socio-Economic & Cultural Effects:

1. ☒ impact to hunting / trapping / fishing
2. ☐ impact on ☐ women
 - ☐ men
 - ☐ children
 - ☐ elders
3. ☒ impact to traditional use or traditional use area
4. ☐ impact to outfitters
5. ☐ impact on recreational use
6. ☐ impact on family structure
7. ☐ impact to community health
8. ☐ change in community economics
9. ☐ change in community housing or infrastructure
10. ☐ impact to industry
11. ☐ change in regional transportation
12. ☒ impact to archaeological or cultural landmarks
13. ☒ impact on beauty of the landscape
14. ☐ other, explain _____

Biophysical Environment Effects

15. ☐ deposit into surface or ground water
16. ☐ deposit to marine environment
17. ☐ change in surface or ground water flow
18. ☐ change in water temperature
19. ☐ change in drainage pattern
20. ☐ change in air quality
21. ☐ change in air flow
22. ☐ micro-climate change
23. ☐ ice fog
24. ☒ change in ambient noise level
25. ☒ deposit onto ground surface
26. ☒ change in slope stability
27. ☐ change in soil structure
28. ☒ alteration of permafrost regime
29. ☒ destabilization/erosion
30. ☐ soil compaction
31. ☐ change in access to renewable resources
32. ☐ depletion of non-renewable resource
33. ☐ removal of rare/endangered plant species
34. ☐ introduction of species
35. ☒ toxin, heavy metal accumulation
36. ☐ removal of rare/endangered wildlife species
37. ☐ change in wildlife health
38. ☒ impact to large mammals (caribou/polar bears)
39. ☐ impact to small mammals
40. ☐ impact to fish
41. ☒ impact to birds
42. ☐ impact to other wildlife
43. ☐ impact in a calving, nesting, staging or spawning area
44. ☐ removal of wildlife buffer zone
45. ☐ change in wildlife habitat/ecosystem
46. ☐ other, explain _____

9. Cumulative Effects: Identification of Other Resources Used in the Area. Identify past, current and future (pending applications) physical works and activities in the area (for the proponent, other proponents and nearby communities) and their potential adverse environmental effects.

Other Resource Uses

(✓ check all the items appropriate to this project)

- ✓ harvesting
 - ✓ marine mammals
 - ✓ land mammals
 - fur bearers
 - ✓ birds
 - shellfish
 - plants
 - berries
 - ✓ fish
- mining
 - ✓ exploration
 - ✓ open pits
 - ✓ underground
 - off-shore
- ✓ mineral processing
 - industry _____ (type)
 - ✓ quarries
 - carving stone
 - ✓ aggregate
- transportation/communications
 - ✓ airport / landing strip
 - ✓ roads/access routes
 - ✓ shipping
 - channels/canal
 - telephone lines, satellite dishes, cables
 - beacons
- ✓ waste disposal (solid, liquid or gas?)
- energy project
 - hydro
 - pipeline
 - transmission line
- ✓ other water licenses, permits, leases
- ✓ lands
 - ✓ Inuit owned
 - surface rights
 - sub-surface rights
 - ✓ Crown
 - ✓ Commissioner's
 - ✓ Marine Areas
 - other private lands held under tenure
 - ✓ heritage sites or archaeological sites
 - ✓ recreation (eg. cabins, tent frames)
 - tourism
 - municipal (construction)
 - commercial
 - built structures
 - infrastructure
 - agriculture
 - forestry
 - other, explain _____

Effects from Other Resource Uses

(✓ check all the items appropriate to the scope of this project)

Directly-related Socio-Economic & Cultural Effects:

1. ✓ impact to hunting / trapping / fishing
2. — impact on _____ women
 - men
 - children
 - elders
3. ✓ impact to traditional use or traditional use area
4. — impact to outfitters
5. ✓ impact on recreational use
6. — impact on family structure
7. — impact to community health
8. ✓ change in community economics
9. ✓ change in community housing or infrastructure
10. — impact to industry
11. ✓ change in regional transportation
12. ✓ impact to archaeological or cultural landmarks
13. ✓ impact on beauty of the landscape
14. — other, explain _____

Biophysical Environment Effects

15. — deposit into surface or ground water
16. ✓ deposit to marine environment (airborne minerals)
17. — change in surface or ground water flow
18. — change in water temperature
19. — change in drainage pattern
20. ✓ change in air quality
21. — change in air flow
22. — micro-climate change
23. — ice fog
24. ✓ change in ambient noise level
25. ✓ deposit onto ground surface
26. — change in slope stability
27. — change in soil structure
28. — alteration of permafrost regime
29. — destabilization/erosion
30. — soil compaction
31. — change in access to renewable resources
32. — depletion of non-renewable resource
33. — removal of rare/endangered plant species
34. — introduction of species
35. ✓ toxin/heavy metal accumulation
36. — removal of rare/endangered wildlife species
37. ✓ change in wildlife health (bioaccumulation of contaminants)
38. ✓ impact to large mammals
39. ✓ impact to small mammals
40. ✓ impact to fish
41. ✓ impact to birds
42. ✓ impact to other wildlife
43. — impact in a calving, nesting, staging or spawning area
44. — removal of wildlife buffer zone
45. — change in wildlife habitat/ecosystem
46. — other _____

10. Cumulative Environmental Effects

Based on a comparison of effects identified in #8 and #9.

Matching Number(s)	Description of Cumulative Environmental Effects

NO Will the project make large demands on non-renewable energy sources?

Will the project encourage further developments within the current project or other developments (other similar projects, energy development, generation, petroleum development and extraction, the building of additional roads)? *potentially*

NO Will the project encourage a "boom-bust" economy over an economy of permanence?NO Will the project encourage more wildlife harvesting on account of better access for hunters and fishers?NO Will the project have an effect on the water quality of the watershed? *potentially*NO Will the project have a significant effect on existing land uses?**11. Mitigation Measures**

For each environmental effect identified in #8, #9 and #10, describe the required mitigation measures.

Number(s) (as identified in #8, #9 & #10)	Description of Mitigation Measures

See Screening Decision Report
Terms and conditions

12. Significance

After taking into account the mitigation measures identified in #11, are any of the residual, adverse environmental effects significant?

☐ Yes ☒ No

If yes, identify which one(s), and proceed to #13; if no proceed to #14.

Number(s): _____

13. Likelihood of Occurrence

Of the significant, residual, adverse environmental effects identified in #12, are any likely to occur?

☐ Yes ☒ No

Number(s): _____

14. Information Sources

What sources of information were used in the screening process?

- ☒ local knowledge
- ☐ traditional ecological knowledge
- ☒ land use plans (and draft land use plans)
- ☒ authorizing agencies' data
- ☒ departmental or agency opinions
- ☒ maps
- ☐ photos
- ☒ reports (scientific, economic, social, or anthropological, archival or historical information)
- ☐ Nunavut Environmental Database (NED)
- ☐ personal communications
- ☐ Project Registry (NPC)
- ☐ previous similar projects
- ☐ service organizations
- ☐ media monitoring
- ☐ experts
- ☐ other _____

For information sources identified above, provide contact person and/or information location (for future follow-up): _____

15. Staff Recommendations

Staff Recommendations: (include rationale)

Although Mr. DeGraaf has some concerns with the project related to dust and acid rock drainage, these common problems occur during mining operations. These concerns can best be addressed during the water Board licence renewal process along with DIAND's.

Prepared By: Gedys Tordrey

Screenier

Date: May 11, 2001

(yyyy-mm-dd)

16. NIRB'S Principles

- ☐ The project has significant adverse effects on the ecosystem, wildlife habitat or Inuit harvesting activities.
- ☐ The project may have significant adverse socio-economic effects on northerners.
- ☐ The project will cause significant public concern.
- ☐ The project involves technological innovations for which the effects are unknown.
- ☐ The project **does not** have significant effects or concerns.

17. Indication to the Minister (12.4.4)

N.B. Transfer this information to Box 1: "EA Indication" and "Date of Indication".

- ☐ a) the proposal may be processed without a review under Part 5 or 6; NIRB may recommend specific terms and conditions to be attached to any approval, reflecting the primary objectives set out in Section 12.2.5;
- ☐ b) the proposal requires review under Part 5 or 6; NIRB shall identify particular issues or concerns which should be considered in such a review;
- ☐ c) the proposal is insufficiently developed to permit proper screening, and should be returned to the proponent for clarification; or
- ☐ d) the potential adverse impacts of the proposal are so unacceptable that it should be modified or abandoned.

18. Terms and Conditions

If the determination is 12.4.4 (a), NIRB's terms and conditions include those listed in the Screening Decision Report.

Specific Terms and Conditions to note include

19. Authorization

Approved By:

Elizabeth Ireland
(NIRB Decision Maker)

Date:

May 24/01
(yyyy-mm-dd)

20. Follow-up / Monitoring

Minister's Determination

_____ Minister agreed with NIRB's indication.
Action: _____

_____ Minister varied NIRB's indication.
Action: _____

_____ Minister rejected NIRB's indication
Action: _____

If applicable,

_____ Is a follow-up/monitoring program required? If yes, give details.

_____ Has screening report information been added to NIRB's GIS/Calyx system?



Fisheries
and Oceans

Pêches
et Océans

Fish Habitat Management
Box 358
Iqaluit Nunavut
X0A 0H0

May 7th, 2001

Rita Becker
Licensing Administrator
Nunavut Water Board
P.O. Box 119
Gjoa Haven NU X0B 1J0
Phone: (867)- 360-6338
Fax: (867)- 360-6369

RE: NWB1NAN9702 Nanisivik Water License Renewal, CanZinco Ltd.

Dear Rita,

This letter is in response to the application for a water license renewal by CanZinco Ltd, submitted to DFO-Habitat Management (DFO-HM) for comments by the Nunavut Water Board. DFO-HM's assessment primarily includes concerns regarding fish habitat. Additional information is required from CanZinco Ltd. with respect to:

- Windblown tailings dust- Although mitigation measures have been implemented to prevent wind from mobilising tailings, DFO-HM concurs with Environment Canada that further information is required to assess the effectiveness of these measures.
- Waste rock stockpiles bordering Twin Creek- Studies indicate that both natural sulphide outcrops and waste rock stockpiles contribute to elevated metal levels in Twin Creek. Although recent investigations document temporal trends in metal loading, it is unclear what measures CanZinco Ltd. will undertake to address further metal contamination associated with the waste rock dumps.
- Toxicity tests in marine organisms- Toxicity tests suggest elevated metal levels may negatively impact sand dollars at the mouth of Twin Creek. Although further studies are intended in 2001, it is uncertain how those studies are going to guide future operations and reclamation activities at the mine.

Canada

MAY-08-2001 TUE 11:33 AM 7

FAX NO. 8

979 8039

I. 00

Please feel free to contact me at (867) 979-8007 or by fax at (867) 979-8039 should you have any questions regarding the above.

Sincerely,

Jordan DeGroot
Habitat Management Biologist
Eastern Arctic Area
Department of Fisheries and Oceans

Cc: Gladys Joudrey, Nunavut Impact Review Board

Canada



Indian and Northern
Affairs Canada
www.inac.gc.ca

Affaires indiennes
et du Nord Canada
www.ainc.gc.ca

Nunavut Regional Office
Water Resources Division
P.O. Box 2200
Iqaluit, NU
X0A 0H0

Votre file - Votre référence

Telephone: (867) 975-4548
Facsimile: (867) 975-4560

May 4, 2001

NIRB#01WR043

Nunavut Impact Review Board
P.O. Box 2379
Cambridge Bay, NT X0E 0C0

ATTENTION: Gladys Joudrey

**RE: Comments on Water Licence Renewal Application
NIRB#01WR043**

The Water Resources Division has reviewed the above application for the renewal of water licence number NWB1NAN9702. Although this project has ongoing water-related concerns, the technical aspects shall be addressed through DIAND's participation in the water license renewal process.

Thank you for the opportunity to comment. If you have any questions, please do not hesitate to call me at (867) 975-4548.

Yours truly,

Paul Smith
Manager, Water Resources Division

Canada



ᐃᓕᓂᐃᓕᓂᐃᓕ

Department of
Culture, Language, Elders & Youth

Pithohilikioni

Ministère du gouvernement
Culture Langues, Aînés et Jeunesse

Culture and Heritage Division

Culture, Language, Elders & Youth
Government of Nunavut
P.O. Box 800
Iqaluit, NT X0A 0H0

April 10, 2001

Gladys Joudrey
Environmental Assessment Screener
Nunavut Impact Review Board
Box 2379
Cambridge Bay, NU X0E 0C0

Re: Land Use Application NIRB 01WR043; Water Use and Waste Disposal for Nanisivik Mine (CanZinCo. Ltd.)

Due Date: May 8, 2001

Dear Ms. Joudrey:

At your request, the Department of Culture and Heritage, Government of Nunavut, has reviewed the above-noted application. Our recommendations follow.

We recommend approval of the above-cited application, as the proponent's proposed activities do not constitute a threat to known archaeological resources.

The attached conditions specify plans and methods of site protection and restoration to be followed by the permittee if an archaeological site is encountered or disturbed in the course of the land use activity.

Sincerely,

[Signature]
Leah Olak, Director
Culture and Heritage
Department of Culture, Language, Elders and Youth

Encl.





ᐃᓕᓄᓐᓂᓐᓂᓐ

Department of
Culture, Language, Elders & Youth

Pliihilikioni

Ministère du gouvernement
Culture Langues, Aînés et Jeunesse

ARCHAEOLOGICAL RESOURCES: TERMS AND CONDITIONS

BACKGROUND

- I. The archaeological record of the Inuit of Nunavut is a record of Inuit use and occupancy of lands and resources through time. The evidence associated with their use and occupancy represents a cultural, historical, and ethnographic heritage of Inuit society and, as such, Government recognizes that Inuit have a special relationship with such evidence, which shall be expressed in terms of special rights and responsibilities.

The archaeological record of Nunavut is of spiritual, cultural, religious and educational importance to Inuit. Accordingly, the identification, protection, and conservation of archaeological sites and specimens and the interpretation of the archaeological record is of primary importance to Inuit and their involvement is both desirable and necessary.

In recognition of the cultural, spiritual and religious importance of certain areas in Nunavut to Inuit, Inuit have special rights and interests in these areas as defined by Article 33 of the Nunavut Land Claim Agreement.

- II. "Archaeological site" means a site or work within Nunavut of archaeological ethnographical or historical importance, interest or significance, or a place where an archaeological specimen is found, and includes explorer's cairns.

"Archaeological specimen" means an object or specimen found in an archaeological site of archaeological ethnographical or historical importance, interest or significance, or a place where an archaeological specimen is found, and includes explorer's documents.

- III. Any new Terms and Conditions raising issues found in ss. 10 and 16 of the Territorial Land Use Regulations should duplicate statutory sections, or be stricter, but not more lenient in terms of protection of archaeological resources.

- IV.
 1. The permittee shall not operate any vehicle over a known or suspected archaeological site.
 2. The permittee shall not remove, disturb or displace any archaeological specimen or site.
 3. The permittee shall contact the Department of Culture, Language, Elders and Youth (867-975-5500) and DIAND officials should an archaeological site or specimen be encountered or disturbed by any land use activity.
 4. The permittee shall immediately cease any activity which disturbs an archaeological or historical site, encountered during the course of a land use operation, until permitted to proceed with the authorization of the Department of Culture, Language, Elders and Youth, Government of Nunavut, Iqaluit.
 5. The permittee shall follow the direction of the Department of Culture, Language, Elders and Youth and DIAND in restoring disturbed archaeological sites to an acceptable condition.
 6. The permittee shall provide information to the Department of Culture, Language, Elders and Youth about each archaeological site or specimen encountered by any land use activity, by completing the attached form.
 7. The permittee shall make best efforts to ensure that all persons working under authority of the permit are aware of these conditions concerning archaeological sites and specimens.
 8. The permittee shall avoid the known archaeological sites as listed in Attachment #1

9. The permittee shall have an archaeologist perform the following functions, as required by the Department of Culture, Language, Elders and Youth: survey, inventory and documentation of the archaeological and historical resources of the land use area; assessment of potential for damage to archaeological sites; mitigation; marking boundaries of archaeological sites for avoidance; restoration. The Department of Culture, Language, Elders and Youth shall authorize by way of a Nunavut Archaeologist Permit all procedures subsumed under the above operations.



Fisheries and Oceans
Canada

Pêches et Océans
Canada

Coast Guard

Garde côtière

Central & Arctic Region

Région du Centre et de l'Arctique

201 N. Front Street, Suite 703
Sarnia, Ontario
N7T 8B1

Your file Votre référence

Our file Notre référence
1675-9-9

April 12, 2001

Gladys Joudrey
Nunavut Impact Review Board
PO Box 2379
Cambridge Bay, NT X0E 0C0

Dear Madam:

Thank you for your submission with regard to NIRB # 01WR043, Water Use & Waste disposal for Nanisivik Mine.

The information will be reviewed by this office and our response will be forwarded to DFO Fish Habitat in Iqaluit. They in turn will prepare a Departmental response encompassing both the Navigable Waters Protection Act and the Fisheries Act.

Yours truly,

Rick McLean
Inspections Supervisor
Navigable Waters Protection

RAM/kab

cc: FHM

Canada



Nunavut Planning Commission *aqut q'adac* NUNAVUTMI PARNAYUT

April 30, 2001

Gladys Joudrey
Environmental Officer
Nunavut Impact review Board
P.O. Box 2379
Cambridge Bay, NU
X0E 0C0

RE: Application NIRB01WR043

The Nunavut Planning Commission has completed its review of Nanisivik Mine's water renewal application. It conforms to the North Baffin Regional Land Use Plan.

Attached, for your files, is a copy of the list of conformity requirements to which the applicant has undertaken to comply to.

Yours truly,

Michèle Bertol,
Senior Policy Analyst

Attachment

cc: Rita Becker, NWB
Kevin LeDrew, Nanisivik Mine

P.O. Box 210

Cambridge Bay, NT X0E 0C3

Tel: 403 983-2730

Fax: 403 983-2732

P.O. Box 2230

Repulse, NT X0A 0H0

Tel: 819 979-1404

Fax: 819 979-1443

P.O. Box 141

Arviut, NT X0C 0E0

Tel: 819 857-2242

Fax: 819 857-2243

HEAD OFFICE

Box 12

Taloyoak, NT X0E 1B0

Tel: 403 566-6896

Fax: 403 566-6897

P.O. Box 201

Randall Bay, NT X0C 0G0

Tel: 819 645-3345

Fax: 819 645-3344

P.O. Box 7

Pond Inlet, NT X0A 0S0

Tel: 819 899-8515

Fax: 819 899-8516

1502 - 130 Albert Street

Ottawa, ON K1P 5S4

Tel: 613 238-1155

Fax: 613 238-5774

Application NIRB 01WR043

LIST OF RELEVANT CONFORMITY REQUIREMENTS

The relevant terms of the plan are noted in each requirement.

2. **Environmental Protection: s3.3.11.8:** The applicant undertakes to prevent any new occurrences of pollution, garbage and contamination at the site of the development.

YES

NO

3. **Removal of Fuel Drums: s3.3.11.8:** The applicant undertakes to remove all drums safely from the site and dispose of the drums in a safe manner.

YES

NO

4. **New Site Restoration and Clean Up: s3.3.11.1 and Appendix C, s1:** The applicant undertakes to clean up the site and restore the site to its natural condition to the greatest extent possible.

YES

NO

5. **Old Site Restoration and Clean Up: s3.3.11.2:** The applicant undertakes to clean up the site and restore the site to its original condition to the greatest extent possible, including any work required due to the applicant's action prior to this application.

YES

NO

6. **Low-Level Air Flights: Appendix C, s3:** Will the applicant avoid all low-level flights?

YES

NO

- i. If not, explain why such flights are or may be absolutely necessary.

- ii. If such flights are or may be absolutely necessary, will they avoid disturbance to people and wildlife?

YES

NO

- iii. If not, explain why it is not possible to avoid such disturbance.

7. Caribou Protection Measures: s3.3.1.7 and Appendix D: Will the applicant comply with the Caribou Protection Measures outlined in section 2.4.6 and in Appendix D?

YES

NO

N/A

8. Caribou Water Crossings: s3.3.1.7 and map: Will the applicant avoid, between May 15 and September 1, to construct any camp, cache any fuel or conduct any blasting within 10 km of any Designated Caribou Water Crossing identified on the certified Caribou Protection Map?

YES

NO

N/A

9. Polar Bear Denning Areas and Walrus Haul-outs: s3.3.1.8: Will the applicant keep its activities away from any polar bear denning area or walrus haul-out?

YES

NO

N/A

HERITAGE RESOURCES

10. Reporting of Archaeological Sites: s3.3.9.3 and Appendix C, s2 and s8: Will the applicant immediately report the discovery of all suspected archaeological sites to the Department of Culture, Language, Elders and Youth (GN)?

YES

NO

MINING

11. Mining Development: s3.3.4.4 & s3.3.4.5: Is the proposal for mining development?

YES

NO

If yes, include with the application a mine closure and restoration plan and the proof of complete financial guarantees for the abandonment and restoration of the site.

On File with the Nunavut Water Board!

19. Local Services and Local Employment: s3.3.7.4: Will the applicant rely on local services and employment where possible?

YES

NO

i. Describe the services retained and the people to be employed.

Contractor: + individual
route from Amato Bay + the
Boffin region

ii. If no, explain why it is not possible.

20. Communication on Scientific Research: s3.2.8 and s3.3.7.5: The applicant will, at minimum, translate a summary of its work into Inuktitut and communicate with communities using language that is clear and non-technical. The results of all scientific research shall be made available to the affected communities as soon as possible.

YES

NO

22. Code of Good Conduct for Land Users: Appendix C: The applicant undertakes to adhere to the code of Good Conduct at all times.

YES

NO

I, Kevin LeDrew (name of applicant), certify that the information I have given in this application is true and correct and hereby make the above undertakings which form part of my application for a project proposal within the meaning of the Nunavut Land Claims Agreement.

Date:

April 19/01

Signature of Applicant:

[Signature]
San Can Zimco Ltd

COMMENT FORM FOR NIRB SCREENINGS

The Nunavut Impact Review Board has a mandate to protect the integrity of the ecosystem for the existing and future residents of Nunavut. In order to assess the environmental and socio-economic impacts of project proposals, NIRB would like to hear your concerns, comments and suggestions about the following project application:

Project Title: Water Use & Waste Disposal for Nanisivik Mine
Proponent: CanZinco Ltd.
Location: Nanisivik Mine, NIRB#: 01WR043
Comments Due By: Tuesday, May 8, 2001

Indicate your concerns about the project proposal below:

- | | |
|---|---|
| <input type="checkbox"/> no concerns | <input type="checkbox"/> traditional uses of land |
| <input type="checkbox"/> water quality | <input type="checkbox"/> Inuit harvesting activities |
| <input type="checkbox"/> terrain | <input type="checkbox"/> community involvement and consultation |
| <input type="checkbox"/> air quality | <input type="checkbox"/> local development in the area |
| <input type="checkbox"/> wildlife and their habitat | <input type="checkbox"/> tourism in the area |
| <input type="checkbox"/> marine mammals and their habitat | <input type="checkbox"/> human health issues |
| <input type="checkbox"/> birds and their habitat | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> fish and their habitat | _____ |
| <input type="checkbox"/> heritage resources in area | _____ |

Please describe the concerns indicated above:

Do you have any suggestions or recommendations for this application?

Do you support the project proposal? YES ☒ NO ☐

Any additional comments?

Council reviewed the Nanisivik Mine application at their Regular Meeting on May 10th and having found no concerns they approved the water license renewal by motion # 85-2001

Name of person commenting: Carl O. Marshall of Arctic Bay
Position: S. A. C. Organisation: Hamlet of Arctic Bay
Signature: Carl O. Marshall Date: May 12, 2001

