- NANISIVIK MINE -

2005 ANNUAL WATER REPORT

(Per Water License NWB1NAN0208)

Submitted To:

The Nunavut Water Board

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Introduction

The Nunavut Water Board issued Nanisivik Mine, a division of CanZinco Ltd., the current license, NWB1NAN0208, on Oct 1, 2002. In compliance with Part B, Item 6 of the License, the following information is submitted as the 2005 Annual Water Report.

Required Reporting (As per part B - General conditions)

Item 6i.

A summary of any construction work, modification and major maintenance work and/or demolition work carried out on the Water Supply Facilities, West Twin Disposal Area, East Adit Treatment Facility, and associated structures;

Regular preventative maintenance was performed on the potable water system, including changing delivery pumps, fittings, and piping as required. During the reclamation of the upper dump pond, the main water line was inadvertently damaged by the excavator. The broken line was repaired the same day with only a few hours interruption to the supply of water to the town site.

The level of the West Twin Reservoir was significantly lowered with the use of a high capacity pump that discharged the water to the polishing pond prior to releasing it into Twin Lakes Creek. This enabled us to clean up the sediments along the shoreline of the reservoir and complete the tailings cover along the toe of the West Twin and Test Cell dykes.

A Spillway between the surface Cell and the West Twin Reservoir was constructed during the 2005 season as per the BGC design. The spillway, (a several metre wide trench) was blasted through the rock to the South of the main dyke, and will safely direct the seasonal run off from the surface cell into the reservoir. There is some minor touch up work to be completed in 2006 along the sides of the spillway.

Some of the sediments from the polishing pond were excavated based on soil sample results taken along the shoreline after the water level was lowered. Further testing will be conducted to delineate any further contamination in this area during the 2006 season.

The thermal covers for the surface cell and test cell were also completed in 2005 except for some shaping of rip rap material that was placed along the shore of the test cell dyke. Construction of the covers proceeded as per the approved cover design plan and was supervised by a qualified Field Representative (BGC Engineering Ltd.).

Item 6 ii.

A list of unauthorized discharges and summary of follow-up actions taken;

There were no unauthorized discharges during 2005.

Item 6 iii.

A Progress Report and/or revision of any studies or plans requested by the board under this licence

The Mine Openings and Closure Plan as required by the 2004 approval letter was submitted in 2005. Modifications to the waste disposal plan were required when it was discovered that a significant ice lens had formed in the East end of the mine. This prevented access to the underground workings for disposal of the hydrocarbon-contaminated soils from K-Baseline. These soils were placed in the bottom of the East Open pit adjacent to the high wall. The pit was further filled with waste rock prior to the final thermal covering of the area. Approval from the NWB was obtained for this change to the plan**.**

Item 6 iv.

An executive summary in terms understandable to the general public, translated into Inuktitut, of all plans, reports, or studies conducted under this licence.

The executive summary for the Mine Opening and Closure Plan is included in Appendix E.

Item 6v.

A summary of any closure and reclamation work undertaken during the year and an outline of any work anticipated for the next year, including any changes to implementation and scheduling;

The 2005 season was very productive, however, a considerable amount of work remains to be completed in 2006. A brief summary of the work completed in each area is shown below and the revised implementation schedule is included in appendix G.

West Twin Disposal Area

The majority of the planned reclamation for the West Twin Disposal area was completed by the end of 2005. The reclamation tasks for this area are summarized below:

Task	Status	Remaining work
Shale cover on Surface Cell	Complete	
Shale cover on Test Cell	Complete	
Sand & Gravel Armour Surface Cell	Complete	
San & Gravel Armour Test Cell	Complete	
Test Cell Dyke Rip Rap	Incomplete	Minor shaping required
Shoreline Sediments	Complete	
Polishing Pond Sediments	Incomplete	continue excavation and haulage to reservoir
Polishing Pond Outlet structure	Complete	
Spillway between S. Cell And Res	Complete	
Tailings Islands	Incomplete	Need to level off below final reservoir elevation
Reservoir Baffle	Incomplete	Need to widen channel
Water Line Removal	Incomplete	Remove line & related infrastructure.
Instrument Installation	Complete	

East Open Pit Area

The reclamation of this area is complete except for a minor amount of armouring over a deflection berm located at the toe of the thermal cover. The armour material has already been placed and just needs to be shaped over the berm that was constructed during the summer. The thermal cover was extended beyond the limits of the pit to encapsulate any remnant contamination from the waste rock piles which were excavated and used to back fill the east open pit. Hydrocarbon contaminated soils from K-baseline were consolidated into the pit adjacent to the highwall. This was a departure from the original plan and was necessary as the access to the underground workings was prevented by the build up of a large ice plug from the east portal deep into the mine. Additional instruments were installed in the cover to monitor the freeze-back of the areas where Hydrocarbon-contaminated soil was placed.

Area 14

The design cover for this area was completed during 2005. A final inspection of the area will take place in 2006 and any deficiencies found will be addressed.

K-Baseline Area

All the contaminated soils from the shop area as well as the stockpile near the portal and the access road were excavated and hauled to the East Open Pit. A thermal cover was placed on the portal area. This thermal cover was extended beyond the original limits set in the plan to cover some of the natural outcropping of sulphide mineralization adjacent to the portal area.

Oceanview

All contaminated soil was removed from the area and the thermal covers were constructed to completion on both the Oceanview pit and the Oceanview portal.

Land Fill

The thermal cover was completed in 2005 including the sand & gravel armour. Two instruments were installed in the cover to monitor the freeze-back. Domestic waste generated from the town site is now being disposed of underground where it will remain frozen in the permafrost environment of the mine.

Stol Port

The contaminated soils from this area were hauled underground, but lab results indicated one section within the excavation that did not meet the SQRO. This area will be excavated in June 2006 prior to the area being contoured to prevent ponding and to allow for drainage.

Carpenter Shop

The carpenter shop was dismantled and salvaged. The cement pad was removed and hauled underground along with the hydrocarbon-contaminated soils from the area. The area will be re-contoured in 2006 to allow for drainage and to prevent ponding

Industrial Complex Yard

The area to the North of the Industrial Complex main yard (adjacent bone yard) was excavated and hauled underground. There still remains a considerable volume of contaminated soil to be removed in the areas surrounding the Mill complex, the day tanks, fuel island and storage buildings.

ANFO Factory

The contaminated soil from this area was excavated and hauled underground. The area is now closed as confirmatory sampling has shown that the soil quality meets our objectives.

Mill Complex

Good progress was made on the dismantling of the industrial complex. Although the powerhouse remains in tact, the rest of the building has been gutted and is in the process of being dismantled. The DMS plan has also been dismantled except for the two stairwells that will be taken down during 2006. The industrial complex dismantling has been scheduled for completion by the end of July 2006.

Town Site Residences

Three houses were removed during the year. The houses that remain are still tied in to the remaining electrical circuit through the town site. The town site demolition will take place late in the schedule.

Arena

The remaining structure was dismantled and prepped for shipment off site.

Furniture Storage and Cold Storage Buildings

These collapsible buildings were cleaned out and subsequently dismantled. The contractor has reassembled them on the arena cement pad near the town site for sand blasting operations.

West Open Pit

Waste rock located along the roadway and slopes from 09S portal to the West open pit was removed and placed in the pit excavation. The hydrocarbon-contaminated soils from the day tank near the 00 portal were excavated and hauled underground. The shale cover for the pit was incomplete at the end of the 2005 season

Lower Dump Pond

The liner and sludge from this pond was excavated and hauled underground.

Upper Dump Pond

This area was too moist to excavate so it was covered with a minimum of 2 metres of shale and 30 cm of Twin Lakes Sand and Gravel. In total 2550 m^3 of shale was placed as well as 1160 cubic metres of sand & gravel.

Portals

Oceanview, K-Baseline, 17N, 88N and 39N portals were all reclaimed in 2005. Closure consisted of waste rock fill followed by shale and sand and gravel armouring. The portals located in the West Open Pit (00 and 01 portals) have been closed by placement of waste rock fill. Completion of the reclamation will consist of shale and an armour cover of sand and gravel to be completed in 2006.

Quarries/Borrow areas

The Fuji pit, Area 14 pit Shale Hill pit and landfill pit have been reclaimed; however a small amount of work needs to be done to contour the road and berm adjacent to the top of the landfill pit.

Waste Rock

The reclamation of the waste rock piles is now complete.

Regulated Materials

Three PCB transformers were shipped to an off site facility for disposal along with several barrels of fluorescent lamp ballasts. There are two PCB transformers still in service at the site and will be shipped at a later date. The unused laboratory chemicals were also shipped off site for disposal as well as the inventory of used batteries.

Waste Disposal Summary

Various classifications of waste were hauled underground throughout the year. A waste haulage summary is provided in Appendix H.

Item 6 vi.

A Summary of the estimate of the total current mine closure cost based upon mine reclamation and monitoring activities carried out during the past year.

A list of costs attributed to reclamation activities at Nanisivik Mine during 2005 is presented in Appendix F.

Item 6 vii.

A public consultation/participation report describing consultation with local organizations and the residents of the nearby communities

With reclamation activities in full swing, there were no technical meetings regarding the reclamation plan during 2005. Routine communication with the hamlet of Arctic Bay was mostly concerning the distribution of mine assets.

Item 6 viii.

A Brief Summary of work done to address concerns or deficiencies listed in the inspection and/or compliance reports

An inspection was performed in August, 2005 by Ken Russel of Environment Canada. He took a water sample from the decant station 159-4 and also inspected the PCB storage facility. There were no major deficiencies noted

Mr. Geoff Claypool of BGC Engineering conducted the annual geotechnical inspection. There were no major deficiencies noted as previous concerns were addressed during the completion of the thermal cover.

Item 6 ix.

A Report on the Effluent and Water quality monitoring studies conducted during a calendar year.

a. The total volume of potable water pumped from East Twin Lake (ETL) was 48,347 cubic metres. This is slightly less than the 50 to 60 thousand cubic metres that we had anticipated, based on projections from the latter part of 2004. The actual water usage for each month during 2005 is summarized below.

TOTAL VOLUME OF WATER PUMPED FROM EAST TWIN LAKE (2005)												
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Volume	4135	3925	4032	3731	3405	3514	3525	3866	3328	5120	4661	5105
YTD	4135	8060	12092	15823	19228	22742	26267	30133	33461	38581	43242	48347

The average lake level of ETL was 372.03 metres for the year with maximum and minimum levels of 372.41 metres and 371.89 metres respectively The level of ETL was not at anytime, lower than the level of West Twin Lake. The minimum difference in elevation between the two lakes was 1.17m recorded on June 18th. A graphical comparison between the elevation of East Twin Lake and West Twin Reservoir is shown in Appendix A

b. During the year, flow measurements indicated that 1,059,051 cubic metres of water were decanted from the West Twin Reservoir. No water was discharged at the East Adit Treatment Facility from the Final Discharge point. All sampling, sample preservation and quality control procedures were conducted in accordance with methods prescribed in the current edition of “Standard Methods for the Examination of Water and Wastewater”. Samples were collected at the West Twin decant, monitoring stations downstream in the Twin Lakes Creek and at monitoring stations along Chris Creek. The Sampling locations required by the water license are indicated on drawings 1 to 4 by solid red circles beside the name of the station. Tabulated summaries of the data generated for each monitoring station are included as Appendix B.

c. Sampling station159-4 is located at the effluent discharge to Twin Lakes Creek. 159-4A is located approximately 50 metres downstream from the discharge and 159-4B is located approximately 50 metres upstream. Appendix C contains the effluent characterization and water quality monitoring data for these stations required by the metal mine effluent regulations (MMER). Appendix C-2 shows the monthly mean concentrations, pH range and volume of effluent. Appendix D contains the sub-lethal toxicity results required for the environmental effects monitoring (EEM) and Appendix D-2 shows the acute lethality results.

Figure 1

Twin Lakes Area Water Sampling Stations

Figure 2

Industrial Area Water Sampling Stations

Figure 3

East Adit Area Water Sampling Stations

Figure 4

Dock Area Water Sampling Stations

Appendix A

Graphical comparison between
East Twin Lake and West Twin Reservoir

Appendix B

2003 Water Data

Appendix C

Effluent Characterization and Water Quality Monitoring

Appendix C-2

Monthly Mean Concentrations, pH Range and volume of Effluent

Appendix D

Sub-lethal Toxicity Report Summary

Appendix D-2

D-2 Acute Lethality Results

Appendix E

Executive Summaries

English and Inuktitut

Appendix F

Reclamation Costs Summary

Appendix G

Revised Implementation Schedule

Appendix H

Waste Haulage Summary