

AUG 14 2002

PP

**2002 Compliance Report
Nanisivik Mine
Water Licence NWB1NAN9702**

INTERNAL	
PC	☒
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Public Registry

Introduction

The Nunavut Water Board (NWB) issued, on July 31, 1997, licence NWB1NAN9702 (renewal of N5L3-0159) allowing CanZinco Ltd., Nanisivik Mine (formerly Nanisivik Mines Ltd.) the industrial water use and waste disposal associated with mining, milling and associated uses at the Nanisivik Mine. Shortly afterwards (14/11/1997), the NWB agreed to issue SNP Amendment 01, substituting two sampling and flow monitoring requirements. The NWB subsequently issued, on December 9, 1999 Amendment No. 1 thus allowing for open pit operations at Ocean View. On March 20, 2000 Amendment No. 2 as issued allowing for exploration drilling. The said licence was schedule to expire on June 30, 2002. On December 7, 2001 the NWB issued an extension to licence NWB1NAN9702, extending the expiry date to September 30, 2002. This report assesses compliance with the licence from January 1, 2002 to August 14, 2002 inclusive.

Compliance Assessment

Part B General Conditions

Condition Number and Summary

1. Water use fee shall be paid annually in advance.
2. Security Deposit shall be posted and maintained.
3. The Security Deposit may be used to fulfill conditions of this licence where there is a contravention.
4. The Licencee may submit the Terms of Reference for the establishment of a

Compliance Assessment

Compliance in the form of a receipt for water usage from July 31, 2001 to July 31, 2002

Non compliance by Licencee increase of \$1.0 million security bond has not been made by July 31, 2002 due date.

No use of the Security Deposit was required in 2002.

Not Applicable

Reclamation Trust Fund.

Condition Number and Summary

5. Annual report filed with NWB prior to March 31 of the following year.

A. Monthly and Annual quality of water pumped from East Twin Lake.

B. Monthly and Annual quantity of water pumped from West Twin Lake Disposal Area for use in the mill.

C. Monthly/ Annual quantity of waste water and solids discharged to West Twin disposal Area.

D. Monthly/ Annual quantity of waste discharged from West Twin Lake Disposal Area to West Twin Creek.

E. Daily/ Monthly/ Annual quantity of waste discharge from East Adit Treatment Facility.

F. Report all data collected for SNP.

Compliance Assessment

Compliance pending.
report due on March 31, 2003.

Partial compliance in the form of monthly SNP reports for the period from January 2002 to April 2002 total 70,640 m cubed. May, June and July have not yet been received.

Partial compliance in the form of monthly SNP Reports for the period of January 2002 to April 2002 total 412,010 m3. May June and July have not been received.

Partial compliance in the form of SNP data for January -April 2002 the quantity of tailings discharge in 2002 was 456,920 m3 of which 83,550 m3 was the solid fraction and 373,370 m3 was liquid.

Non compliance a notification was provided on May 30, 2002 regarding decanting from East Twin Lake but no discharge data has been provided as of August 14, 2002.

Non Compliance a notification of decanting at East Adit Treatment Facility was provided on June 24, 2002 but no quality of discharge water was provided as of August 14, 2002.

Partial compliance a substantial amount of the required SNP data has yet to be provided.

G. Report on storage capacity, quantity of sub-aqueously deposited Tailings, bathymetric survey, and topographical map for West Twin Disposal Area.

Condition Number and Summary

H. Summary of construction of modification to any water use/waste facilities and associated structures.

I. Summary of all work carried out under Waste Rock Disposal Plan.

J. List of all unauthorized discharges and follow-up actions taken.

K. Reports on waste management, water use and restoration studies requested by board.

L. Approved revisions to Abandonment and Restoration Plan.

M. Summary of Abandonment and Restoration work undertaken during year.

N. Update of total mine restoration cost.

O. Public consultation report.

Compliance in the form of tailings disposal plan February 2002.

Compliance Assessment

Non compliance no information provided in respect to discharge of Ocean View wastewater to the underground workings of the mine.

Compliance in the form of Waste Rock Disposal Plan was provided on February 2002.

Non compliance no follow up action taken in respect to unauthorized discharge at Ocean View Open Pit.

Compliance in the form of submitting Environmental Assessment Phase 2 report and Closure and Reclamation Plan on February 28, 2002.

Compliance in the form of submitting the Closure and Restoration Plan on February 28, 2002. NWB had granted an extension from December 7, 2001 to February 28, 2002.

Compliance pending end of 2002 season.

Non compliance Nanisivik mine has continued to use cost estimates of \$12.5 million from 2001 A&R plan.

Compliance in the form of public meetings Held in Arctic Bay on

P. Summary of work done to address concerns listed in inspection/ compliance reports.

January and July 2002.

Non compliance by Licencee no summary of work done for 2001 inspection season 14, 2002.

Condition Number and Summary

Compliance Assessment

Q. Any other details requested by NWB by November 1st.

Compliance pending.

R. Executive summary in Inuktitut of all plans and reports.

Non compliance by Licencee Waste Rock Disposal Plan not provided with Inuktitut summary.

6. All research shall follow "Ethical Principals for the Conduct of Research in the North".

Compliance by Licencee.

7. Surveillance Network Program shall be completed.

Non compliance by Licencee no SNP data have been provided for May, June and July 2002.

8. SNP and compliance dates may be modified by the NWB.

Compliance by Licencee by following SNP amendment 01 November 12, 1997 and the second on December 9, 1999.

9. Metres and measuring devices shall be installed, operated and maintained to the satisfaction of the inspector.

Compliance by Licencee no inadequacies were noted with measuring devices.

10. Signs identifying SNP stations to be posted and maintained to the satisfaction of the Inspector.

Compliance by Licencee all SNP stations appeared to have signage indicating SNP stations.

11. A copy of the Licence shall remain at the site at all times.

Compliance by Licencee.

Part C- Conditions Applying to Water Use

Condition Number and Summary

1. All fresh water to be obtained from East Twin Lake.
2. Quantity of water withdrawn shall not exceed 180,00 m3.

Condition Number and Summary

3. Water use shall be minimized by recycling Tailings stream water for use in the mill.
4. No cross connections between reclaim line to or from West Twin Reservoir and the freshwater line from East Twin Lake.
5. Level of East Twin Lake shall not be lower than the level of West Twin Reservoir.
6. Licencee shall install and operate and maintain measuring equipment providing a continuous record of West and East Twin Lakes water levels.

Compliance Assessment

Compliance by Licencee in that all fresh Water was obtained from East Twin Lake.

Compliance in that Licencee has withdrawn 70,640 m3 of water in 2002.

Compliance Assessment

Compliance in that Licencee has recycled approximately 341,370 m3 of water at the mill to date.

Compliance in that Licencee has no cross conceptions in reclaimed and fresh water lines.

Partial compliance in that East Twin Lake has not been lower than West Twin Reservoir for the period of time, results are required for May, June and July 2002.

Compliance in that Licencee has operated and maintained measuring equipment in West and East Twin Lakes

Part D- Conditions Applying to Waste Disposal

Condition Number and Summary

1. All tailings shall be deposited in West Twin Disposal Area.
2. All mine water from open pits shall be deposited to West Twin Disposal Area or East Adit Treatment Facility.

Compliance Assessment

Non compliance in that tailings spills on April 11, 2002 and wind blown tailings on May 2002 resulted in tailings being deposited outside disposal area.

Non compliance in that wastewater from Ocean View Open Pit was pumped underground to abandon locations of the mine.

3. All run off water from open pits shall meet effluent quality standards.

Non compliance in that water sampled from Twin Creek indicate that Arsenic, Cadmium, Copper Lead and Zinc levels are in excess of licence maximum concentrations.

4. 10 days notice must be provided to Inspector prior to any planned discharges from West Twin Disposal Area and East Adit Treatment Facility.

Non compliance in that on May 30, 2002 notification of decanting at West Twin Disposal Area commenced on May 28, 2002. And notification of decanting at East Adit Treatment Facility on June 24, 2002.

Condition Number and Summary

Compliance Assessment

5. All waste discharges shall meet effluent quality standards.

Non compliance in that water samples obtained from Twin Creek exceeded levels of Arsenic, Cadmium, Copper Lead and Zinc levels are in excess of licence maximum concentrations

6. East Adit Treatment Facility is operated and maintained as per Licence conditions.

Non compliance in that no SNP data has been provided after receiving notification on June 24, 2002.

7. West Twin Disposal Area is operated and maintained as per Licence conditions

Non compliance in that no analytical data was presented in reference to the quality of water discharged from West Twin Disposal Area.

8. If tailings are deposited underwater, a bathymetric survey shall be carried out.

Compliance in the form of a bathymetric drawing of the WTDA on December 15, 1999.

9. Licence shall submit within 2 months of issuance of licence a plan outlining their taking inspection and follow-up programs.

Compliance in the form of submitting Inspection Program : Nanisivik Dyke and Containment Structures on August 23, 1999; (approved on September 18, 2000 by NWB).

10. Inspection of earthworks and hydrological regimes is to be carried out annually. Inspection report is to be submitted within 60 of inspection.

Non compliance in that no Geotechnical inspection of Waste Containment Dikes was preformed in 2002 to date.

11. The Licencee shall submit by February 1, 1997 a plan for future modifications to the disposal area.

Compliance in that an update of the Tailing Disposal Plan in March 2002.

12. The elevation of the dykes shall only exceed present elevation with written approval of the NWB.

Compliance by requests to raise WTDA dyke from 386 to 388 m on September 21, 1998 (approved by NWB on March 29, 1999). On February 7, 2000 request to raise test cell dyke from 371.5 to 373.5 m.

Condition Number and Summary

Compliance Assessment

13. The licensee shall ensure runoff is diverted away from the temporary storage pad and Ocean View open Pit (Amendment No. 01)

Compliance by Licencee.

14. All accumulated Ocean View Pit water is to be directed to a sump and hauled to the East Adit Treatment Plant prior to final discharge (Amendment No. 01)

Non compliance Licencee has pumped water from Ocean View Open Pit to abandon sections of the mine.

15. The Licencee shall conduct drilling exploration according to various proper procedural terms (Amendment No. 02)

Compliance by Licencee.

Part E - Conditions Applying to Spill Prevention and Contingency Planning

Condition Number and Summary

Compliance Assessment

1. Licencee shall submit by December 1, 1997 a revised Contingency Plan.

Compliance by Licencee by submission of Spill Contingency Plan on November 30, 1998 (NWB approved plan on January 18, 1999).

2. A back up pump and or other contingency plan shall be put in place at East Adit Treatment Facility.

Compliance by Licencee.

3. The Plan referred to in Part E, Item 1 shall be amended to reflect Part E, Item 2.

Compliance by Licencee.

4. Contingency Plan shall be reviewed and updated annually.

Non compliance by Licencee in that no update has been provided for in 2001.

5. Contingency Plan of Part E, Item 1 is not approved by Board, a revised plan must be submitted within 30 days upon receiving notification of decision.

Non compliance no plan has been submitted to NWB for approval in 2001.

6. If a spill occurs, a detailed report must be submitted within 30 days of the spill to the Inspector.

Non compliance by Licencee in that no spill report was provided for the tailings that were blown in town in May 2002, for the discharged of Mill Dump Pond to West Open Pit on May 19, 2002.

Part F- Conditions Applying to Modifications

Condition Number and Summary

Compliance Assessment

1-2. Modifications may be completed without NWB's approval provided conditions listed in licence are met.

Compliance by Licencee.

3. As-built plans of modifications must be submitted to NWB.

Compliance by Licencee.

Part G- Conditions Applying to Studies

Condition Number and Summary

Compliance Assessment

1. Licencee shall submit by January 1, 1998 the terms of references for a study which demonstrates the hydraulic confinement of the West Twin Disposal Area.

Compliance by Licencee.

2. Licencee shall submit within 6 months of issuance of licence a plan for ARD and geochemical characterization, including all the items listed in licence.

Compliance by Licencee in the form of Acid Rock Drainage Assessment and prediction on January 26, 1998 (approved February 2, 1999), Acid Generating Potential of Tailings and Shale Cover Material: Kinetic Testing Interim Report

3. Licencee shall submit within 7 months of issuance of licence the terms of references for study on chronic toxicity downstream of West Twin Disposal Area.

4. Licencee shall submit by April 1, 2000 an Environmental Site Assessment of waste disposal sites.

Condition Number and Summary

5. Licencee shall submit within 3 months of issuance of licence a plan for continuation of metal loading study in Twin Lake Creek.

6. Licencee shall submit within 8 months of issuance of licence a study proposal on stabilization of exposed tailings.

7. Licencee shall submit within 6 months of issuance of licence an updated monitoring plan of on-land disposal of tailings.

8. Licencee shall submit within 3 months of issuance of licence an update of Waste Rock Disposal Plan.

on May 11, 1999 (not yet approved)
Acid Generating Potential of Tailings a
Shale Material: Kinetic Testing Final Report
on September 24, 1999 (not yet approved)

Compliance by Licencee by submitting
Chronic Toxicity Testing: Mouth of Twin
Lakes Creek in Strathcona Sound study
on February 23, 1998 (approved by NWB
with investigation suggestions on June 3,
1998.

Partial compliance in the form of a
Phase 1 Environmental Site Assess-
ment on March 20, 2000 and Phase 2
Environmental Site Assessment on April
2001 both reports were only partially
completed missing much data

Compliance Assessment

Compliance in the form of submitting of
Proposal for Continuation of Metal
Loading Study in Twin Lakes Creek on
October 30, 1997. The plan was approved
in February 19, 1999 pending several
conditions.

Compliance in the form of On Land
Disposal of Tailings Stabilization:
Operating Study Plan on January 23,
1998. The plan was approved by NWB
with some additions on June 15 1999.

Compliance in the form of On Land
Disposal of Tailings Monitoring Plan on
January 22, 1998. The plan received
NWB approval on February 19, 1999
pending several conditions were met.

Compliance by licensee.

9. Licencee shall implement the plans referred to in Part G, Items 1-8 as and when approved by the Board.

10. If not approved by the board, Plans referred to in Part G, Item 9 are to be resubmitted within 30 days of receiving notification of decision.

11. Plans referred to in Part G, Item 9 are to be revised annually.

12. Licencee shall produce an up-to-date plan of dyke structure and tailings disposal area at least 60 days prior to construction of next dyke in West Twin Disposal Area.

Condition Number and Summary

13. Licencee shall submit within 2 months the results of stability analysis of existing dyke.

14. Licencee shall submit by November 1, 1998 study results of evaluation of shale cover material.

15. By March 31 of each year, Licencee shall submit results of Test Cell Evaluation Study and incorporate results into Final Abandonment and Restoration Plan.

Part H- Conditions Applying to Abandonment and Restoration

Condition Number and Summary

1-2. Submissions of Abandonment and Restoration Plan within 9 months of

Compliance by Licencee.

Partial compliance in that all plans listed above were approved in 2000. The Environmental Site Assessments were asked to be resubmitted in 2001.

Partial compliance with the submission of Tailings Disposal Plan in March 2002 and Waste Rock Disposal Plan in February 2002.

Non compliance according to Section D -12, the Licencee requested to raise the dyke by 2 meters on March 20,2000 no record of an up-to-date plan of the dyke structure is in our files at this time.

Compliance Assessment

Compliance in the form of submitting the Risk Assessment of West Twin Disposal Area Dike on September 7, 2000 and Follow-up Analytical work on West Twin Dike Stability on November 20, 2000.

Compliance with this section by Licencee.

Compliance pending end of season.

Compliance Assessment

Compliance by Licencee an Interim Abandonment and Restoration Plan on

issuance of licence. The plan will include all the elements of Part H, Item 2 of the Licence.

3. Licencee shall provide annual update to current mine restoration liability using RECLAIM.

4. If Board requires revision of plan, revision should be submitted within 6 months of receiving notification. If revision is not approved, a new revision is to be submitted within 2 months of notification.

5. Licencee shall implement the Abandonment and Restoration Plan annually and notify the plan accordingly.

6. Licencee shall review the abandonment and restoration plan annually and modify the plan accordingly.

Condition Number and Summary

7. Licencee shall notify Board of final closure of mine as soon as feasible.

8. If licensee notifies Board in writing of mine closing indefinitely, a final Abandonment and Restoration Plan must be submitted within 60 days of notification.

May 14, 1998. NWB requested re-submission citing numerous recommendations.

Non compliance by Licencee
A&R Plan liability costs of \$12.5 million from 2001 report used.

Compliance in the form of submitting 2000 Interim Abandonment and Restoration Plan on March 20, 2000.

Compliance by Licencee.

Compliance in the form of submitting Nanisivik Mine Closure and Reclamation Plan on February 28, 2002.

Compliance Assessment

Compliance by Licencee by announcing on October 31, 2001 that Nanisivik Mine will be closing on September 2002.

Compliance by licensee having announced closure on October 31, 2001; the due date for Abandonment and Restoration Plan was December 31, 2001. On December 7, 2001 the NWB extended the deadline to February 28, 2002 which the Licencee met.

Conclusion

In the year 2002, the Licencee was mostly in compliance with the terms of their water licence NWB1NAN9702. Non-compliance issues are noted for Items B-2, Item B-5, D-1, D-2, D-4, E-4 and G-12.

The major outstanding non-compliance issues is the lack of Nanisivik Mine to provide security bond as required in Item B - 2.

Problems were noted by the Inspector in the year 2001 and it appears that samples are not collected at the appropriate time and/or parameters were not measured as required to maximize the efficiency of treatment. Nanisivik Mine has had difficulty in meeting their compliance requirements with regards to discharges at East Adit Treatment Facility and samples taken during this inspection indicate that values in excess of the maximum allowable by licence may be discharged from EATF.

The unauthorised discharge of wastewater from Ocean View Open Pit to abandon underground operations of Nanisivik Mine without authorisation from the NWB in direct contravention of Item D Part 13.

Several sampling requirements of the Surveillance Network Program (SNP) were not made or collected. Nanisivik Mine has failed to provide SNP data for the months of May, June and July.

Some of these outstanding issues may be resolved prior to the end of this operational year. This report is being prepared prior to the completion of this year.

If you have any questions please contact me.

Sincerely,

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