DECISION

LICENCE NUMBER: NWB1NAN9702

This is the decision of the Nunavut Water Board (NWB) with respect to an application for a Licence Renewal dated January 17, 1997, made be:

Nanisivik Mines Limited

to renew the Licence to allow for mining, milling, and associated uses at Nanisivik Mines Limited, Nanisivik, Northwest Territories.

With respect to this application, the NWB gave notice to the public that Nanisivik Mines Limited had filed an application for renewal. Subsequently, the NWB held a public hearing in Arctic Bay on September 25, 1996 to hear concerns from intervenors and interested parties.

DECISION

After having been satisfied that the application had been screened pursuant to the Environment Assessment and Review Process Guidelines Order (1984) and that any potentially adverse environmental effects were insignificant or mitigable with known technology, the NWB decided that the application could proceed through the regulatory process. After reviewing the submission of the Applicant and the written and oral comments expressed by intervening parties during the public hearing held in Arctic Bay on September 25, 1996, the NWB, having given due regard to the facts and circumstances, the merits of the submissions made to it and to the purpose, scope and intent of the Nunavut Land Claims Agreement, determined that:

Licence Number NWB1NAN9702 be issued subject to the terms and conditions contained therein.

SIGNED this day _____ day of July 1997 at Baker Lake, NT.

Thomas Kudloo
Chairperson

TABLE OF CONTENTS

1. INTRODUCTION

Following an application filed by Nanisivik Mine Limited on January 25, 1996 to the Northwest Territories Water Board, the Department of Indian and Northern Affairs Canada (DIAND) conducted an environmental screening of Nanisivik's request to renew its industrial water licence for water use and waste disposal for mining, milling, and associated uses at its operations at Nanisivik. The screening was conducted pursuant to the provisions of Section 5 of the Canadian Environmental Assessment Act (CEAA). The application was referred for review and comments to Fisheries and Oceans Canada, Environment Canada, the Renewable Resources Department and the Health and Social Services Department (G.N.W.T.), the Baffin Region Inuit Association, the Hamlet of Arctic Bay, the Nunavut Impact Review Board Transition Team, and the Nunavut Water Board Transition Team. Based upon the results of this screening and technical review, including consideration of any potential accidents, malfunctions, or cumulative environmental effects that the overall project might have in the area, DIAND concluded that this project could proceed through the regulatory process.

In accordance with the Northwest Territories Waters Act, a public hearing was required for the renewal of a type A licence. On July 9, 1996, the Nunavut Water Board was formally established and took over the responsibility for this application. Notice of a public hearing was posted on July 26, 1996 in all newspapers having a general circulation in Nunavut. Local and regional organizations such as the Hamlet of Arctic Bay and the Nunavut Tungavik Incorporated were notified directly that a public hearing would be held in September 1996. A public hearing was held on September 25, 1996 in the community of Arctic Bay.

After considering and reviewing the evidence presented at the hearing and subsequently through written interventions, by the residents of Arctic Bay, interveners and interested parties the NWB has issued licence NWB1NAN9702.

II. GENERAL CONSIDERATIONS

3. Term of the Licence

Based on the powers held by the Northwest Territories Water Board under the Northern Inland Waters Act, the NWB may issue a licence for a term not exceeding twenty-five years. In licence NWB1NAN9702, the NWB imposes requirements for extensive studies . In order to properly carry out these studies, sufficient time shall be given to permit the licensee to develop and submit the terms of reference of the studies, to gather and analyze data, to implement mitigative measures, and to complete the reports to the satisfaction of the NWB. Therefore, the NWB believes that a term of five years is appropriate. A 5-year licence also takes into account the fact that there will be another renewal of the licence before closure of the mine, which is projected to happen in seven years.

B. Security Deposit

Security deposits are funds which are set aside for mine site restoration after closure, whereas performance bonds are generally used for remedial activities in case of contamination during the mine's operation. In this case, the NWB believes that it is appropriate to allow the security deposit to be used for both purposes.

The NWB has concluded that it is necessary and appropriate to adopt the principle of full recovery as the basis for establishing the amount of the security deposit required from licensees. The Board may fix the amount of security required to be furnished by the applicant in an amount not exceeding the aggregate of the costs of:

a. Abandonment of the undertaking;
b. Restoration of the site of the undertaking; and
c. Any ongoing measures that may remain to be taken after the abandonment of the undertaking.

In fixing an amount of security, the Board may have regard to:

a. The ability of the applicant, licensee or prospective assignee to pay the costs referred to in that subsection; and
b. The past performance by the applicant, licensee or prospective assignee in respect of expired licences or any other licence or approval.

Several factors including the licensee's own preliminary assessment of reclamation costs for the mine (approximately 9 million dollars), the recent change of ownership to a company that has never operated in the Northwest Territories, and the potential for significant environmental contamination if the mine closure is not completed according to generally accepted environmental standards in Canada, have led the NWB to believe that the security deposit should be substantially greater than that required in the previous licence. However, the NWB considers that imposing a security deposit equal to the actual costs of reclamation would not be required at this time, particularly since the Board may modify the amount of security in light of the total current mine restoration cost to be provided as a requirement of this licence. To ensure that the Crown will bear no costs for proper abandonment and restoration and long term monitoring after closure of the mine, the Board has decided that a security deposit with annual increments throughout the term of the license, resulting in a htotal amount of six million dollars at the expiry date of this licence, would provide adequate guaranty. Moreover, the Board considered in its deliberations the fact that it has imposed conditions in the new licence requiring the mine to perform progressive abandonment and

restoration work.

In its decision, the NWB also took into consideration the fact that some infrastructure at Nanisivik, such as the sewage treatment plant, are the property and responsibility of the Government of the Northwest Territories .

C. Reporting Requirements

The requirements imposed on the licensee in this licence are for the purpose of insuring that the NWB has an accurate annual update of the mine's activities during a calendar year. From evidence presented by residents of Arctic Bay at the public hearing, there is a clear need for increased effective communication between the mine and the residents of Arctic Bay. The NWB has requested that the mine provide an executive summary in Inuktitut of all studies and reports prepared under this licence. The Board feels that it is important that the information collected and analyzed as requirements of this licence be summarized in the appropriate languages and given back to the residents of nearby communities.

D. Biophysical issues

Tailings Containment

The Board is of the opinion that all tailings produced by the mine must be deposited and contained in the disposal area. The licensee must take all necessary action and measures to ensure that tailings are not allowed to be dispersed, at any time, outside of the approved disposal area.

Geotechnical Engineer

The NWB believes that it is the responsibility of the licensee to ensure that the design, construction, maintenance, and operation of the tailings impoundment facility and other associated earthworks are adequate and meet approved standards. To be satisfied, the NWB requests that inspection be carried out annually by an independent Geotechnical Engineer to ensure that the licensee is maintaining safe operating conditions at that site. Furthermore, the NWB believes that the proponent must establish inspection guidelines to ensure continuity and a standardized procedure over the duration of the licence. Considering that the mine is situated in a delicate permafrost environment, the NWB believes it is critical that the Geotechnical Engineer have specialized experience in the design and construction of earthworks in a permafrost environment.

Stability Analysis of West Twin Disposal Area

The NWB has requested a stability analysis be performed to verify the geotechnical criteria and assumptions used in the design of this structure, and to ensure the stability of the dyke structure is unquestionable.

4. Spill Prevention

Back-up Pump System

To ensure that no unauthorized discharge occurs from East Adit Treatment Facility as a result of power failure, the Board believes that a back up system must be in place as a contingency measure at the East Adit Treatment Facility.

5. Studies

Involvement of the HTO

All studies, whether completed by the Licensee or an independent consultant, are reviewed by the NWB. This review tests the objectivity and reliability of these studies. Ultimately, it is the Board who approves these studies, and it is not required to do so if the studies are inadequate.

In some instances, the licensee is required to consult with the HTO in developing the Terms of Reference, thus providing the opportunity for residents of the nearby community to provide specific input in the design of a study, and generally to express concerns to the licensee regarding the operation of the mine. The licensee is required to consult with the HTO, but the HTO has the right to decline participation if it wishes to do so.

Hydraulic Confinement of West Twin Disposal Area

To be satisfied that contaminated waters are contained in the West twin Disposal Area and are not contaminating East Twin Lake (Water Supply source), the NWB requires that a study confirm the hydraulic confinement of the West Twin Disposal Area.

Acid Rock Drainage

The objective of static tests is to identify samples (rock, tailings, soils) that have the potential to generate net acidity. The test procedure, known as acid-base accounting (ABA), provides a value known as Net Neutralization Potential used to determine if a particular sample will theoretically generate acidity over time. Once samples have been identified, kinetic tests are

used to subject the samples to chemical weathering under controlled laboratory conditions in order to confirm the potential to generate net acidity, to measure the rates of acid generation and sulfide oxidation, and to determine the leaching of heavy metals.

Kinetic tests must be performed over several months in order to provide reliable data. The information obtained is critical as it may show the acid generation is negligible or that it may be severe only for a relatively short period, which would suggest that long term treatment is unnecessary. On the other hand, if the results of the kinetic tests show that long term treatment is necessary, then the kinetic data can be used to address the severity and duration of acid drainage. These same test results can then be used to optimize treatment and control techniques before and after abandonment.

To ensure that appropriate actions are taken to control and treat potential ARD areas, the licensee is required to submit a plan which in turn will be implemented according to conditions set out by the NWB upon approval of the plan.

Chronic Toxicity Study

Toxicity testing is vital in understanding the effects of the mine on the environment and the health of the inhabitants of the region. The residents of Arctic Bay expressed serious concerns concerning the effects of contaminants on living organisms. The NWB believes that chronic toxicity testing must be done to evaluate possible contamination and potential impacts on aquatic resources at the mouth of Twin Lakes Creek. Requirements for chronic toxicity tests are normally imposed on applicants during the collection of baseline information before construction of a project or early during its operation. These tests should have been done at the time of the original licence application. This makes its important that such tests be carried out now, and the NWB has concluded that this type of data is necessary to assess the full effects of the mine on the environment, and particularly at the mouth of Twin Lakes Creek where it flows into Strathcona Sound.

Solid Waste Disposal Site

In light of concerns expressed at the public hearing regarding the disposal of waste oil drums in the landfill site, and the lack of data on current and past waste disposal sites and practices, the NWB requests an evaluation of past and present landfill sites. This study will give the NWB a better understanding of the situation when assessing abandonment and long term monitoring requirements.

On Land Disposal of Tailings

Concerns were expressed at the public hearing regarding the continued problems associated with the depositing of tailing on land. The NWB believes that the licensee must investigate

options for solving the problems of tailing becoming air borne. Furthermore, the licensee must document the extent of the amount and types of particulate matter that becomes air borne to determine the level and extent of environmental contamination.

Dyke Structure

The Board considers that it is necessary to ensure that the dyke structure is stable and will not fail, thus causing environmental damages. The NWB believes that this type of data is critical and must be documented by the licensee.

Test Cover Material

The reclamation plan for the tailings containment area is dependant upon the use of shale as cover material. To ensure chemical stability and long term viability of the process, the NWB believes that further geotechnical studies be conducted as this process is relatively new and its performance is still largely undocumented.

6. Abandonment and Restoration (A&R)

The current A&R plan on file with the Board is only an interim plan. Given that the proponent is likely to request only one more licence renewal before closure, the NWB would like to ensure that no complications are encountered and that all required data are available well before final abandonment. To accomplish these objectives, the NWB considers that additional detailed information from the licensee and progressive A&R is necessary.

7. Other

Kuhulu Lake

Concerns were raised by some residents about possible contamination of Kuhulu Lake when the area was used as a base camp for exploration and pre-development activities before the construction of the mine. Despite the validity of these concerns, there is no evidence that suggests that this lake is or has been contaminated by the mine. Nevertheless, the NWB will ensure that the concerns of these residents are addressed by the competent federal and territorial authorities.

Compensation

Article 13.8.1 of the NLCA states that: “The NWB, when considering a water licence, may issue guidelines to the applicant for provision of information with respect to the following:

I. GENERAL CONSIDERATIONS (contd.)

(d) steps which the proponent proposes to take to compensate interests adversely affected by water use."

The NWB has the discretion to issue guidelines with respect to steps which a proponent proposes to take to compensate interests adversely affected by water use. There is no requirement that it be done, and the Board decided not to do so for the following reasons: the application was originally made to the NWT Water Board; and this was a licence renewal and because no significant change in water use was proposed, there was little reason to think that new compensations issues would be raised.
The Board exercised this discretionary power in a reasonable manner in ligh of the above reasons, and the fact that no one raised the issue of compensation until long after the hearing and deadline for written submissions had passed.

Authority of the Board

The Nunavut Land Claims Agreement (NLCA) specifically states no person may use water or dispose of waste into water without the approval of the NWB. Contrary to the Northwest Territories Water Board which has the authority to approve only certain types of licences under the Northwest Territories Waters Act, other types of uses being subject to ministerial approval under the same Act, the Nunavut Water Board has the authority to approve any use of water and disposal of waste under the NLCA. Such an approval by the Board is not subject to the review, concurrence, validation, or approval by the Minister of Indian and Northern Affairs.

III. LICENCE NWB1NAN9702

Pursuant to 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

NANISIVIK MINES LIMITED

(Licensee)

of **NANISIVIK, NORTHWEST TERRITORIES, X0A 0X0**

(Mailing Address)

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

Licence Number **NWB1NAN9702**

Water Management Area **NORTHWEST TERRITORIES 05**

Location **NANISIVIK, NORTHWEST TERRITORIES**

Purpose **INDUSTRIAL WATER USE AND WASTE DISPOSAL**

Description **MINING, AND MILLING, AND ASSOCIATED USES**

Quantity of Water Not to be Exceeded **180,000 CUBIC METRES**

Date of Licence **JULY 1, 1997**

Expiry Date of Licence **JUNE 30, 2002**

Dated this ____ of July 1997 at Gjoa Haven, NT.

Thomas Kudloo
Chairperson

PART A: SCOPE AND DEFINITIONS

1. SCOPE

1. This licence entitles Nanisivik Mines Limited to use water and dispose of waste for industrial undertakings in base metal mining, milling and associated uses at Nanisivik Mines Limited's Nanisivik Mine, Nanisivik, Northwest Territories, (73°02· N, 84°32· W) as shown in Figure 1, appended to this licence.

c. This Licence is issued subject to the 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 a future Nunavut Waters Act, or other statutes imposing more stringent conditions relating to the quantity or type of waste that may be so deposited or under which any such waste may be so deposited this Licence shall be deemed, upon promulgation of such Regulations, to be subject to such requirements; and

d. Compliance with the terms and conditions of this Licence does not absolve the Licensee from responsibility for compliance with all applicable Federal, Territorial and Municipal legislation.

2. DEFINITIONS

In this Licence: **NWB1NAN9702**

"Average Concentration" means the concentration as determined in Part B, Item 6 of the "Surveillance Network Program" submitted to the Board in accordance with the sampling and analysis requirements specified in the "Surveillance Network Program";

"Board" means the Nunavut Water Board established under the Nunavut Land Claims Agreement;

"Dump Pond" means an engineered structure designed to temporarily contain tailings material from the tailings lines as detailed on drawing titled "Environmental Impact Nanisivik Area Drainage Basins," dated May 29, 1990;

"East Adit Treatment Facility" means the treatment and discharge facility used for the treatment of contaminated runoff and minewater from the East Adit and ore stockpile area as described in: Figure 3.4 titled "Modified East Adit Water Treatment System"

dated January 23, 1988; Drawing No. 50-102/17 titled "Typical x-section East Pit Retention System," dated August 16, 1986, Drawing No. 50-102/16 titled "East Pit Retention System", dated August 16, 1986; Drawing No. 30-15/02 titled "Waste Dump Environmental Control", dated August 20,1984; and Drawing No. 50-102/15 titled "East Pit Retention System", dated August 17, 1986;

"Freeboard" means the vertical distance between the water surface elevation and the lowest elevation of the effective water containment crest of the dam, dyke or other containment structure;

"Geotechnical Engineer" means a professional engineer registered with the Association of Professional Engineers, Geologists, and Geophysicists of the Northwest Territories or a similar Provincial Engineering Association and whose principal field of specialization is the design and construction of earthworks in a permafrost environment;

"Grab Sample" means a single water or wastewater sample taken at a time and place representative of the total discharge;

"HTO" means the "Hunters and Trappers Organization" of Arctic Bay, also known as Niglasuk Hunters and Trappers;

"Inspector" means an Inspector designated by the Department of Indian and Northern Affairs Canada in a manner consistent with the Memorandum of Understanding between the Department of Indian and Northern Affairs and the Board;

"Licensee" means the individual or organization to whom licence NWB1NAN9702 is issued or assigned;

"Minewater" means ground water or any other water used in mining which is pumped or flows out of any underground workings or open pit;

"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;

"Reclamation Trust Fund" means a trust recognized by the Canadian Income Tax Act by which the beneficiary establishes, under the terms of a contract entered into with Her Majesty in right of Canada on or after January 1, 1996, funds set aside for the sole purpose of funding the reclamation of a mine;

"Tailings" means material in solid and liquid form rejected from the process plant after

PART A: DEFINITIONS (contd.)

the recoverable minerals have been extracted;

"Waste" means any substance that, by itself or in combination with other substances found in water, would have the effect of altering the quality of any water to which the substance is added to an extent that is detrimental to its use by people or by any animal, fish or plant, or any water that would have that effect because of the quantity or concentration of the substance contained in it or because it has been treated or changed, by heat or other means;

"Waste Rock" means all unprocessed rock materials that are produced as a result of mining operations and having no economical value;

"Water Supply Facilities " comprises the area and associated intake infrastructure at East Twin Lake; and

"West Twin Disposal Area" consists of the tailings containment basin known as the Surface Cell, the structures designed to contain tailings, and West Twin Reservoir as identified in Drawing Number, 50-101/52, titled "West Twin Lake Disposal Area," dated November 19, 1993.

PART B: GENERAL CONDITIONS

1. The water use fee shall be paid annually in advance as set out in Schedule II annexed to this licence.

2. The Licensee shall post and maintain a security deposit according to the following schedule:

   a) within thirty (30) days of issuance of this licence, an amount of one million $1,000,000 dollars;

   b) and one million $1,000,000 dollars annually thereafter for the term of this licence.

   c) such further or other amounts as may be required by the Board based on annual estimates of current mine restoration liability in accordance with Part H, Item 3 of this Licence.

3. The security deposit may be applied to carry out work necessary to fulfil requirements of this licence where there is contravention of a condition of the licence and subsequent failure by the licensee to comply with a direction issued by the Board or by any other competent and authorized government department and agency whose requirements are

equally stringent as those of the Board. Security deposits may be applied for a failure to meet operational requirements as well as the provision of the Final Abandonment and Restoration Plan.

The Security Deposit shall be maintained until such time as the Board is satisfied that the Licensee has complied with all provisions of the approved Final Abandonment and Restoration Plan. This clause shall survive the expiry of this Licence or renewals thereof.

3. The Licensee may submit to the Board for approval the Terms of Reference for the establishment of a Reclamation Trust Fund. The Licensee shall implement the terms of the Trust Agreement as, and when, approved by the Board.

4. The licensee shall file a report with the Board no later than March 31 of the year following the calendar year reported, which shall contain the following information:

1. The monthly and annual quantities (in cubic metres) of water pumped from East Twin Lake for industrial and municipal purposes;

2. The monthly and annual quantities (in cubic metres) of water pumped from the West Twin Disposal Area for use in the mill;

3. The monthly and annual quantities (in cubic metres) of the solid and liquid fractions of the tailings discharged to the West Twin Disposal Area;

4. The monthly and annual quantities of waste discharged from the West Twin Disposal Area at the decant to West Twin Creek;

5. The monthly and annual quantities of waste discharged from the East Adit Treatment Facility and daily quantities of waste discharged;

6. Tabular summaries for all data and information generated under the "Surveillance Network Program";

7. A report describing the utilized and remaining tailings storage capacity which shall include a bathymetric survey as required in Part D, Item 8 and a topographical survey map for the West Twin Disposal Area. The report will also describe the occurrences and quantities of tailings deposited subaqueously;

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

PART B: GENERAL CONDITIONS (contd.)

9. A summary of all work carried out under the Waste Rock Disposal Plan in accordance with Part G, Item 9 including the updated results of ongoing Acid Rock Drainage and related geochemical test work;

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

11. A progress report on any studies requested by the Board that relate to waste management, water use, and restoration, as well as a brief description of any future studies planned by the Licensee;

12. Any approved revisions to the approved Abandonment and Restoration Plan;

13. A summary of any abandonment and restoration work undertaken during the year and an outline of any work anticipated for the next year;

14. An updated estimate of the total current mine restoration cost based upon the results of the mine restoration research, the mine development monitoring, and any modifications to the mine plan;

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

16. A brief summary of work done to address concerns or deficiencies listed in the inspection reports and/or compliance reports;

17. Any other details on water use or waste disposal requested by the Board by November 1st of the year being reported; and

18. An executive summary in terms understandable to the general public translated into Inuktitut of all plans, reports, or studies conducted under this licence, including, but not limited to, reports required under section 5 (o).

5. All research and studies undertaken by the Licensee shall follow the "Ethical Principles for the Conduct of Research in the North", Association of Canadian Universities for Northern Studies (1982).

6. The Licensee shall comply with the "Surveillance Network Program" annexed to this Licence, and any amendment to the said "Surveillance Network Program" as may be made from time to time, pursuant to the conditions of this Licence.

7. The "Surveillance Network Program" and compliance dates specified in the Licence may be modified at the discretion of the Board.

PART B: GENERAL CONDITIONS (contd.)

8. The Licensee shall install meters or such devices, or use such methods as approved by the Board for measuring the volumes of water used and waste discharged. The meters and measuring devices or methods shall be operated and maintained to the satisfaction of an Inspector.

9. The Licensee shall continue to maintain the necessary signs to identify the stations of the "Surveillance Network Program". All postings shall be located and maintained to the satisfaction of an Inspector.

10. The Licensee shall ensure a copy of this Licence is maintained at the site of operation at all times.

PART C: CONDITIONS APPLYING TO WATER USE

1. The Licensee shall obtain all fresh water needed for mining, domestic use and make-up water for milling from East Twin Lake using the Water Supply Facilities or as otherwise approved by the Board.

2. The annual quantity of water withdrawn from East Twin Lake shall not exceed 180,000 cubic metres.

3. The Licensee shall maximize the use of water from the West Twin Reservoir by recycling this water for use within the mill.

4. The Licensee shall not permit any cross connection to exist between the reclaim line to or from the West Twin Reservoir and the freshwater line from East Twin Lake.

5. The Licensee shall not lower the level of East Twin Lake such that the level of East Twin Lake is below the level of the West Twin Reservoir.

6. The Licensee shall install, operate and maintain measuring equipment to provide a continuous record of water levels at East Twin Lake and the West Twin Reservoir.

PART D: CONDITIONS APPLYING TO WASTE DISPOSAL

1. The Licensee shall deposit and contain all tailings in the West Twin Disposal Area.

2. The Licensee shall deposit all minewater from open pits to the West Twin Disposal Area or the East Adit Treatment Facility except as referred to in Part D, Item 3.

3. Notwithstanding Part D, Item 2, all runoff and water pumped from open pits and adits which is not deposited in the West Twin Disposal Area or the East Adit Treatment Facility shall meet the effluent quality standards specified in Part D, Item 5.

4. The Licensee shall provide at least ten (10) days notice to an Inspector prior to any planned discharges of waste from the West Twin Disposal Area and the East Adit Treatment Facility during each calendar year.

5. All waste discharged by the Licensee shall not exceed the following effluent quality standards at the point of discharge:

PARAMETER	MAXIMUM AVERAGE CONCENTRATION	MAXIMUM CONCENTRATION OF ANY GRAB SAMPLE
Total Arsenic	0.25 mg/l	0.50 mg/l
Total Cadmium	0.005 mg/l	0.01 mg/l
Total Copper	0.10 mg/l	0.20 mg/l
Total Lead	0.10 mg/l	0.20 mg/l
Total Zinc	0.25 mg/l	0.50 mg/l
Oil and Grease	15 mg/l	30 mg/l
Suspended Solids	15 mg/l	30 mg/l
The waste shall have a pH between 6.0 and 9.5.		

6. The Licensee shall operate and maintain the East Adit Treatment Facility such that:

   1. The volume of effluent discharged is measured and recorded daily during periods of flow;

   2. The inspections of the retention pond and structures are carried out weekly during periods of open water and records are kept of these inspections for review upon request of an Inspector; and

   3. At least one (1) metre of freeboard is maintained at the retention berm at all times.

7. The Licensee shall operate and maintain the West Twin Disposal Area such that:

   1. At least one (1) metre of freeboard is maintained for water within the West Twin Disposal Area at all times;

PART D: CONDITIONS APPLYING TO WASTE DISPOSAL (contd.)

2. Surface water or ground water does not enter East Twin Lake from the West Twin Disposal Area;

3. Surface water or ground water does not enter the West Twin Disposal Area from either East Twin Lake, its diversion channel or Twin Lakes Creek;

4. The diversion dam and diversion channel for East Twin Lake are maintained to prevent any erosion;

5. The signs posted around the West Twin Disposal Area warning that the Lake is being used for the deposit of waste, are maintained to the satisfaction of the Inspector;

6. Inspections of the West Twin Disposal Area and tailings lines are carried out weekly and records kept of these inspections for review upon the request of an Inspector; and

7. More frequent inspections of the area specified in Part D, Item 10(f), are performed at the request of an Inspector.

8. If tailings are deposited underwater, the Licensee shall carry out an annual bathymetric survey of the West Twin Disposal Area using one (1) metre contour intervals for mapping purposes.

9. The licensee shall submit to the Board for approval, within two (2) months of issuance of this licence, a plan outlining the inspection and follow-up programs. The inspection program of facilities should follow the Northwest Territories Water Board "Guidelines for Tailings Impoundment in the Northwest Territories", February 1987, and as generally specified in the "Canadian Dam Safety Association Guidelines", January 1995. Following Board approval, the licensee shall implement the plan as per Part D, Item 10.

10. An inspection of the earthworks, the geological regime, and the hydrological regime of the West Twin Disposal Area, East Adit Treatment Facility, and Dump Ponds is to be carried out annually during the summer by a Geotechnical Engineer. The Geotechnical Engineer's report shall be submitted to the Board within sixty (60) days of the inspection, with a covering letter from the Licensee outlining an implementation plan to respond to the Engineer's recommendations.

11. The Licensee shall submit to the Board, by February 1, 1998, a plan for future modifications or additions to the disposal area as well as a geotechnical stability analysis of the proposed design. The plan will include a description of the proposed

PART D: CONDITIONS APPLYING TO WASTE DISPOSAL (contd.)

instrumentation and monitoring program to verify the geotechnical criteria and assumptions used in the design.

12. The elevation of the dyke shall only exceed the present elevation with written approval from the Board.

PART E: CONDITIONS APPLYING TO SPILL PREVENTION AND CONTINGENCY PLANNING

1. The Licensee shall submit to the Board for approval by December 1, 1997, a revised Contingency Plan to the July 1992 Contingency Plan. The plan shall be accordance with the Northwest Territories Water Board's, "Guidelines for Contingency Planning" (1987).

2. A back up pump system (stand by power) and/or other contingency plan shall be developed and put into place at the East Adit Treatment Facility to prevent the release of untreated effluent to the environment.

3. The plan referred to in Part E, Item 1 shall be amended to reflect changes as required in Part E, Item 2.

4. The Contingency Plan shall be reviewed annually by the Licensee and revised as necessary to reflect changes in operation and technology. The annual update shall outline any spill training and communications exercises carried out within the year being revised. The proposed revisions shall be approved in writing by the Board.

5. If not approved by the Board, the Contingency Plan referred to in Part E, Item 1 shall be revised and resubmitted within thirty (30) days of receiving notification of the Board's decision.

6. If, during the period of this Licence, an unauthorized discharge of waste occurs, or if such a discharge is foreseeable, the Licensee shall:

   a. Employ the Contingency Plan;

   b. Report the incident immediately via the 24-Hour Spill Reporting Line (403) 920-8130; and

   c. Submit to an Inspector a detailed report on each occurrence no later than thirty (30) days after initially reporting the event.

PART E: CONDITIONS APPLYING TO SPILL PREVENTION AND CONTINGENCY PLANNING (contd.)

PART F: CONDITIONS APPLYING TO MODIFICATIONS

1. The Licensee may, without written consent from the Board, carry out modifications to the Water Supply Facilities and Waste Disposal Facilities provided that such modifications are consistent with the terms of this Licence and the following specific 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;

    b. Such modifications do not place the Licensee in contravention of the Licence;

    c. The Board has not, during the 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

    d. The Board has not rejected the proposed modifications.

2. Modifications for which all of the conditions referred to in Part F, Item 1 have not been met can be carried out only with written consent from the Board.

3. 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 submitted to the Board on material that will reproduce with a standard printer.

PART G: CONDITIONS APPLYING TO STUDIES

1. The Licensee shall submit to the Board for approval by January 1, 1998 the Terms of Reference for a study which demonstrate the hydraulic confinement of the West Twin Disposal Area. The Licensee shall develop the Terms of Reference after consultation with the HTO and other appropriate agencies. The Terms of Reference shall address, but not be limited to, the following: the methodology to be adopted; the duration of the study; the remedial or corrective measures required, and provide a discussion as to how the results of the study will be used for ongoing environmental management of the mine. The study shall include an implementation schedule.

2. The Licensee shall submit to the Board for approval within six (6) months of

issuance of this Licence a plan for conducting Acid Rock Drainage (ARD) and Geochemical Characterization. The Plan shall be in accordance with the Department of Indian and Northern Affairs (DIAND) "Guidelines for Acid Rock Drainage Prediction in the North, September 1992" and shall include, but not be limited to, the following:

a. Static and kinetic acid base accounting testing on tailings, cover and dyke construction materials sufficient to demonstrate long term chemical stability of cover materials, compatibility of cover materials to tailings and tailings leachate and buffering capability of cover materials;

b. Static acid base accounting tests on representative waste rock used in the construction of mine site roads, open pit walls, stockpiles, exposed rock faces from road cuts;

c. Options for collection and treatment of ARD; and

d. An implementation schedule.

3. The Licensee shall submit to the Board for approval within seven (7) months of issuance of this Licence the proposed Terms of Reference for a study to perform chronic toxicity testing at a monitoring station located downstream of the West Twin Disposal Area. The Licensee shall develop the Terms of Reference after consultation with the HTO and other appropriate agencies. The Terms of Reference shall address, but not be limited to, the following: the research questions to be answered; the methodology to be adopted; the duration of the study; and shall provide a discussion as to how the results of the study might be used for ongoing environmental management of the mine. The study shall include an implementation schedule.

4. The Licensee shall submit to the Board for approval by April 1, 2000, an Environmental Site Assessment of all past and present solid waste disposal sites. The assessment shall include, but not be limited to, the following:

a. Types and volumes of industrial wastes disposed of and buried over the life of the facilities;

b. Evaluation of potential significant environmental impacts given the geographical characteristics of the surrounding area and water courses;

c. An evaluation of the present disposal method, and recommendations for final abandonment and closure of the facility;

d. A list of present and future monitoring plans; and

PART G: CONDITIONS APPLYING TO STUDIES (contd.)

e. An implementation schedule.

5. The Licensee shall submit to the Board for approval within three (3) months of issuance of this Licence a plan for the continuation of the Metal Loading Study in Twin Lakes Creek and Strathcona Sound. Amendments to the plan, if any, shall be filed with the Board for approval. The results of the Metal Loading Study will be incorporated in an overall adaptive environmental management strategy employed by the Licensee.

6. The Licensee shall submit to the Board for approval within eight (8) months of issuance of this licence a study proposal which investigates tailings stabilization techniques for the exposed tailings. The study shall include, but not be limited to, the following:

a. Physical stabilization;

b. Chemical stabilization; and

c. An implementation schedule.

7. The Licensee shall submit to the Board for approval within six (6) months of the issuance of this licence an updated plan for the monitoring of on-land disposal of tailings. The plan shall include, but not be limited to, the following:

1. Establishment of a thermistor and frost gauge network within the above-surface deposition cell;

2. Leachate water quality analysis from the above-surface deposition cell;

3. Consultation with HTO and other appropriate agencies in developing the Terms of Reference for monitoring wind blown tailings. The Terms of Reference shall include, but not be limited to, the following:

1. Map indicating location of Hi-volume air samplers;

2. Assessment of particle size distribution, chemical composition of particulate samples collected; and

3. Ground photo documentation during snow cover of area between Arctic Bay and Strathcona Sound.

d. An implementation schedule.

PART G: CONDITIONS APPLYING TO STUDIES (contd.)

8. The Licensee shall submit to the Board for approval within three (3) months of issuance of this licence an update of the plan titled "Waste Rock Disposal Plan", dated April 20, 1992.

9. The Licensee shall implement the Plans referred to in Part G, Item 1, 2, 3, 4, 5, 6, 7 and 8 as and when approved by the Board.

10. If not approved by the Board the plans referred to in Part G, Item 9 shall be revised and resubmitted within thirty (30) days of receiving notification of the Boards's decision.

11. The Licensee shall review the plans referred to in Part G, Item 9 annually and modify as necessary, or as requested by the Board, to reflect changes in operation and technology. Any proposed modification shall be submitted to the Board for approval.

12. The License shall produce and provide for approval by the Board sixty (60) days prior to the construction of the next lift to the dyke in West Twin Disposal Area, an up to date as-built surveyed plan and cross sections of the present dyke structure and tailings disposal area, including a bathymetric survey of West Twin Reservoir, as per Part D, Item 4 (h), and the location of all instrumentation points and borehole investigations completed to date.

13. The Licensee shall submit to the Board for review within two (2) months the results of the stability analysis of the existing dyke structure prepared and approved by a qualified Geotechnical Engineer, including all relevant geotechnical design criteria and assumptions used in the analysis. This shall be supported by an interpretation of the available instrumentation and geotechnical testing data compiled to date.

14. The Licensee shall submit to the Board for review by November 1, 1998 the study results of the test cover evaluation completed to date, and geotechnical data on the shale cover material to demonstrate the long term durability and chemical stability of the cover design. The study results shall include, but not be limited to, the following:

    a. Slake durability;

    b. Freeze thaw durability

    c. Los Angeles Abrasion Test;

    d. Unit Weight;

    e. Absorption;

PART G: CONDITIONS APPLYING TO STUDIES (contd.)

f. Acid base accounting test;

g. General/mineralogical description of the shale; and

h. Cover options and the recommended cover design and details.

15. By March 31 of each year the Licensee shall submit to the Board for review the results of the Test Cell Evaluation Study. A final summary report on the recommended cover for Final Abandonment and Restoration shall be submitted to the Board prior to written notification by the Licensee of final closure.

PART H: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION

1. The Licensee shall submit to the Board for approval within nine (9) months of issuance of this licence a revised Interim Abandonment and Restoration Plan in accordance with the Northwest Territories Water Board's "Guidelines for Abandonment and Restoration Planning for Mines in the Northwest Territories, September 1990" which shall take into consideration all areas referred to in Part H, Item 2.

2. The Licensee shall provide the following additional elements to address abandonment and restoration concerns:

   a. Specific abandonment and restoration objectives for each mine component which shall include, but not be limited to, the following:

      1. Open pits;

      2. All abandoned and active solid waste disposal sites;

      3. Underground workings;

      4. West Twin Disposal Area and associated piping facilities;

      5. Waste rock storage areas;

      6. Water management structures (dams, diversion channels, intake, and delivery system);

      7. Dump Ponds;

8. Borrow pits, ore storage stockpiles, and other disturbed areas;

9. Surface structures (process plant, camps, concentrate storage building, and associated structures)

10. All petroleum and chemical storage areas;

11. Any other areas potentially contaminated with hazardous materials; and

12. Any facilities or areas which may have been affected by development such that potential pollution problems exist.

b. A description of the measures required, or actions to be taken, to achieve the objectives stated in the Guidelines mentioned in Part H, Item 1, and Part H, Item 2 a) for each mine component;

c. A detailed description, including maps and other visual representations, for each site, accompanied by a detailed description of the final desired landscape;

d. A comprehensive assessment of materials suitability, including geochemical and physical characterization and availability for restoration needs, with attention to cover materials, including maps where appropriate showing sources and stockpile locations of all borrow materials;

e. A description of the process to be employed for progressive restoration, and details of restoration scheduling and procedures for coordinating restoration activities with the overall mining sequence and materials balance;

f. A description of how post-closure assessment, monitoring and treatment will be considered, including a description of any post-closure treatment potentially required for drainage water that is not acceptable for discharge as required by Part D, Item 5 from the West Twin Disposal Area;

g. An identification of the research needs for restoration;

h. A description of the monitoring program to be employed in recording the progress of mining activities as they relate to ongoing restoration needs. The relevant components of the restoration monitoring program should be designed to generate data in forms suitable for use in the RECLAIM model or its equivalent. Sampling

PART H: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION (contd.)

and testing protocols for determining the success of restoration measures undertaken should be documented. The program shall include, but not be limited to, the following:

1. Areas with potentially acid/alkaline drainage and metal leaching;

2. Water quality trends in waste rock dump and ore stockpile seepage;

3. Volumes of waste materials produced and stored by type and location, with particular attention to materials requiring measures to mitigate impacts from water that is not acceptable for discharge as required by Part D, Item 5;

4. Areas, slope angles, and relevant topography of waste rock dumps;

5. Methods, timing, and details respecting the placement of cover material and the development of permafrost in tailings material as part of tailings restoration;

6. Stability of surface drainage channel(s) over reclaimed tailings; and
7. Success of applying restoration research results.

i. Details of closure measures proposed in the event of a premature or temporary shutdown at any time during the term of the Licence; and

j. An explanation of how aesthetic concerns will be taken into account in restoration.

3. The Licensee shall provide the Board annually, as required in Part B, Item 5(n) an updated estimate of the current mine restoration liability using the current version of RECLAIM, its equivalent or other similar method approved by the Board.

4. The Licensee shall revise the plans referred to in this section as required by the Board in its review of the plans. Revisions to the plans shall be submitted to the Board for its approval within six (6) months of receiving notification of the Board's requirement for revision. If the plan is not acceptable to the Board, a revision shall be received in the office of the Board within two (2) months after notification.

5. The Licensee shall implement the plans referred to in Part H, Item 4 as approved by the Board in accordance with the schedules and procedures specified in the plans, and shall endeavour to carry out progressive restoration of disturbed areas.

PART H: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION (contd.)

6. The Licensee shall review the Abandonment and Restoration Plan annually, and shall modify the Plan as necessary to reflect input from the Board, changes in operations and technology, and results from restoration research and other studies. All proposed modifications to the Plan shall be submitted to the Board for approval.

7. The Licensee shall notify the Board of final closure of the mine as soon as reasonably feasible.

8. If during the period of this license, the Licensee notifies the Board in writing of the mine closing indefinitely, a final Abandonment and Restoration Plan shall be submitted to the Board for approval within sixty (60) days of notification.

SCHEDULE I

SURVEILLANCE NETWORK PROGRAM

Licence Number: NWB1NAN9702

Effective Date of Licence: July 31st , 1997

Effective Date of Amendment 01: November 12th, 1997

Amendment No.	Amendment	Approved
Amendment 01	Part A. Sampling and Analysis Requirement at 159-12 & 159-12a, as shown.	
Amendment 01	Part C, Item 5. Change in flow monitoring station from 159-10 to 159-6	

A.SNP SAMPLING LOCATIONS, SAMPLING REQUIREMENTS, AND ANALYSIS REQUIREMENT. (Amendment 01)

Station Numbers	Description	Sampling Requirements	Analysis Requirements
159-1	Mill tailings at pump box in the mill.	Monthly	Total Lead Total Cadmium Total Zinc Dissolved Lead Dissolved Cadmium Dissolved Zinc *The pH and solids content of the sample shall be measured prior to filtration.*
159-2	Mill tailings at pump house in the wet well at the West Twin Disposal Area.	Not required	Not required
159-4	Effluent from the West Twin Disposal Area at decant structure.	Daily during decant	Total Lead Total Cadmium Suspended Solids Total Zinc Total Ammonia (pH, temperature and specific conductivity)*
159-6	Twin Lakes Creek, approximately 10 metres upstream from its mouth at high tide.	Weekly during periods of flow	Total Lead Total Cadmium Total Zinc Dissolved Lead Dissolved Cadmium Dissolved Zinc Total Ammonia Suspended Solids (pH, temperature and specific conductivity)*
159-9	Twin Lakes Creek, directly north of the emergency tailings dump point by Dump Pond.	Once every two weeks during periods of flow	Total Lead Total Zinc Suspended Solids Dissolved Lead Dissolved Zinc (pH, temperature and specific conductivity)*
159-10	Twin Lakes Creek, 10 metres upstream of the west tributary from Nanisivik townsite.	Once every two weeks during periods of flow	Total Lead Total Zinc Suspended Solids Total Ammonia (pH, temperature and specific conductivity)*
159-11	Twin Lakes Creek, downstream of old waste-rock disposal area located 350 metres upstream of Station 159-10.	Not required	Not required
159-12	East Portal Creek at the East Adit Treatment Facility discharge point (formerly at roadway from east portal).	Daily for initial fourteen (14) day period of annual discharge weekly thereafter during periods of flow	Total Lead Total Zinc Suspended Solids Total Ammonia (pH, temperature and specific conductivity)*
159-12(a)	East Portal Creek, upstream of the East Adit Treatment Facility.	Not required	Not required
159-13	Chris Creek, 50 metres downstream from the confluence of East Portal and Chris Creek.	Not required	Not required
159-14	Chris Creek, 50 metres upstream from the confluence of East Portal and Chris Creek.	Not required	Not required
159-15	Chris Creek, upstream form where Area 14 drainage enters Chris Creek (at the culvert and formerly referred to as Chris Creek # 2 in Licensee's database).	Once every two weeks during periods of flow	Total Lead Total Cadmium Total Zinc Suspended Solids (pH, temperature and specific conductivity)*
159-16	Below Area 14 on Chris creek (formerly referred to as Chris Creek # 1 in Licensee's database).	Once every two weeks during periods of flow	Total Lead Total Cadmium Total Zinc Suspended Solids (pH, temperature and specific conductivity)*
159-17	Above the outflow of Chris Creek to Strathcona Sound (formerly referred to as Eskimo Beach in Licensee's database).	Not required	Not required

**The pH, temperature and specific conductivity of the sample shall be recorded at the time of sampling.*

B. SNP GENERAL REQUIREMENTS

Amendment 01

1. A quality assurance plan which includes analyses of field blanks and certified reference material, and replicate sampling in order to assess field contamination, accuracy, and precision, shall be submitted to the Board for approval.

1. The plan referred to in Part B, Item 1 of the SNP, shall be implemented as approved by the Board.

2. All sampling, sample preservation and quality control procedures shall be conducted in accordance with methods approved by the Board.

3. All analyses shall be conducted in accordance with methods prescribed in the current edition of "Standard Methods for the Examination of Water and Wastewater", or by such other methods as approved by the Board.

4. All analyses shall be performed in a laboratory approved by the Board.

5. The following example is provided to illustrate the procedures for calculating the average concentration. If the effluent stream is sampled weekly for each substance, the following lead values may be obtained:

Week 1	Sample #1	.15
Week 2	Sample #2	.12
Week 3	Sample #3	.10
Week 4	Sample #4	.18
	Running Average= (.15+.12+.10+.18)/4=.137	
Week 5	Sample #5	.20
	Running Average= (.12+.10+.18+.20)/4=.150	
Week 6	Sample #6	.16
	Running Average= (.10+.18+.20+.16)/4=.160	

C. FLOW MEASUREMENT REQUIREMENTS

1. The daily quantity of water pumped from East Twin Lake for industrial purposes shall be recorded in cubic metres.

2. The daily quantity of waste discharged from the West Twin Disposal Area to Twin Lakes Creek shall be recorded in cubic metres.

3. The daily quantity of waste discharged from the East Adit Treatment Facility shall be recorded in cubic metres.

4. The monthly quantity of solid and liquid fractions of mill waste pumped to the West Twin Amendment 01

Disposal Area shall be recorded in cubic metres.

5. The flow at Station Number 159-6 shall be measured and recorded as approved by the Board.

D. REPORTS

1. The Licensee shall submit to the Board within thirty (30) days following the month being reported, all data and information required by the "Surveillance Network Program", including the results of the approved quality assurance plan.

5. MODIFICATIONS TO THE SNP

1. Modifications to the Surveillance Network Program may be made only upon written approval of the Board.

SCHEDULE II - LICENSING CONSIDERATIONS

I. APPLICATIONS FOR LICENCE AMENDMENT, RENEWAL, ASSIGNMENT OR CANCELLATION.

1. An Application for an amendment or renewal shall be in the form set out by the Board and shall contain the information identified therein and be accompanied by a deposit equal to any water use fee that would be payable under subsection II (1) in respect of the first year of the licence that is being applied for.

6. The fee payable on the submission of an application for the amendment, renewal, cancellation or assignment of this licence is thirty (30) dollars.

7. An application for authorization for the assignment of the licence shall be submitted to the Board, accompanied by the fee set out in (2), no less than 45 days before the date on which the applicant proposes to assign the licence, and shall:

    1. Be signed by the assignor and the assignee; and
    k. Include the name and address of the assignee.

8. An application for cancellation of a licence shall be in writing and shall set out the reason for the requested cancellation and a description of the measures taken or proposed to be taken, prior to cancellation, for abandonment of the appurtenant undertaking.

II. WATER USE FEES

1. The fee payable by the licensee for the right to the use of water, calculated on an annual basis, in respect of an industrial, mining and milling undertaking, is the greater of thirty (30) dollars and the aggregate of:

    a. For the first 2,000 m^3 per day that is authorized by the licence, $1 for each 100 m^3 per day,
    b. For any quantity greater than 2,000 m^3 per day but less than or equal to 4,000 m^3 per day that is authorized by the licence, $1.50 for each 100 m^3 per day, and
    c. For any quantity greater than 4,000 m^3 per day that is authorized by the licence, $2 for each 100 m^3 per day.

2. For the purposes of paragraph (1), where a licence authorizes the use of water on a basis other than a daily basis, the licence fee payable shall be calculated by converting the rate of authorized use to an equivalent daily rate.

3. Where the volume of water is specified in a licence to be total watercourse flow, the

licence fee will be calculated using the mean daily flow of the watercourse, calculated on an annual basis.

4. Licence fees are payable only for the portion of the year during which the licence is in effect.

5. The licence fees shall be paid:

    a. In respect of a licence for a term of one year or less, at the time the licence is issued; and
    b. In respect of a licence for a term of more than one year:

        i. For the first year of the licence, at the time the licence is issued, and
        ii. For each subsequent year of the licence, or for any portion of the final year of the licence, in advance, on the anniversary of the date of issuance of the licence.

III. SECURITY DEPOSITS

1. Security deposits shall be in the form of:

    a. A promissory note guaranteed by a bank in Canada and payable to the Receiver General;
    b. A certified cheque drawn on a bank in Canada and payable to the Receiver General;
    c. A performance bond approved by the Treasury Board for the purposes of paragraph (c) of the definition "security deposit" in section 2 of the *Government Contract Regulations*;
    d. An irrevocable letter of credit from a bank in Canada; or
    e. Cash

2. Security deposits shall be furnished by the licensee:

    a. In respect of a licence for a term of one year or less, no later than 30 days after the licence is issued; and
    b. In respect of a licence for a term of more than one year:

        i. For the first year of the licence, no later than 30 days after the licence is issued, and
        ii. For each subsequent year of the licence, or for any portion of the final year of the licence, in advance, on the anniversary of the date of issuance of the licence.

SCHEDULE III - GENERAL CONDITIONS FOR THE ADMINISTRATION OF LICENCES ISSUED BY THE NUNAVUT WATER BOARD (NWB)

1. At the time of issuance, a copy of the Licence is placed on the Water Register in the NWB Head Office in Gjoa Haven, and is available to the public.

2. To enforce the terms and conditions of the Licence, the Department of Indian Affairs and Northern Development designates Inspectors in a manner consistent with the Memorandum of Understanding between the Department of Indian and Northern Affairs and the NWB. The Inspectors coordinate their activities with the NWB staff and officials of the Water Resources Division of DIAND. The Inspector responsible for Licence No. NWB1NAN9702 is located in the Nunavut District office.

3. To keep the NWB and members of the public informed of the Licensee's conformity to Licence conditions, the Inspectors prepare inspection and compliance reports which detail observations on how the Licensee has met each condition in the Licence. These reports are forwarded to the Licensee with a covering letter requesting what action, if any, should be taken. The inspection reports and covering letters are placed on the public Water Register, as are any responses received from the Licensee pertaining to the inspection reports. It is therefore of importance that the Licensee react in all areas of concern regarding inspection reports so that these concerns may be clarified.

4. If the Licensee contemplates the renewal of Licence No. NWB1NAN9702 , it is the responsibility of the licensee to apply to the NWB for renewal of the licence. The past performance of the licensee, new documentation and information, and issues raised during a public hearing, if the NWB is required to hold one, will be used to determine the terms and conditions of the Licence renewal. If the licence expires before the NWB issues a new one, then water use and waste disposal must cease, or the Licensee will be in contravention of the Nunavut Land Claims Agreement. The NWB recommends that an application for the renewal of Licence No. NWB1NAN9702 be filed at least one year before the Licence's expiry date.

5. If Licence No. NWB1NAN9702 requires amendment, then a public hearing may be required. The Licensee should submit applications for amendment as soon as possible to give the NWB sufficient time to go through the amendment process. The duration of the process may vary depending on the scope of the amendment requested.

6. The NWB can modify the Surveillance Network Program annexed to the licence without a public hearing. Requests for changes to the Surveillance Network Program should be forwarded to the NWB in writing, and should include the justification for the change.

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

Philippe di Pizzo
Executive Director
Nunavut Water Board
P. O. Box 119

Gjoa Haven, NT. X0E 1J0
Telephone No:(403) 360-6338
Fax No: (403) 360-6369

8. Inspection and enforcement of the terms and conditions of this licence are performed by:

Nunavut District Office
Northern Affairs Program
Department of Indian Affairs
and Northern Development
P. O. Box 100
Iqaluit, NT. X0A 0H0
Telephone No:(819)979-4405
Fax No: (819)979-6445

9. The Licence requires that you submit a security deposit to the attention of:

Paul Lecomte
Office Manager
Nunavut Water Board
P. O. Box 119
Gjoa Haven, NT. X0E 1J0
Telephone No: (403) 360-6338
Fax No: (403) 360-6369

9. The licensee shall submit all report, plans and studies to the Board in three copies.

APPENDIX II

PARTICIPANTS : SEPTEMBER 25, 1996 PUBLIC HEARING, ARCTIC BAY, NT

Appearances for Nanisivik Mines Limited and Breakwater Resources
Mr. J. Marshall, Vice-President, Nanisivik Mines Limited
Mr. B. Carreau, Environmental Coordinator, Nanisivik Mines Limited
Mr. R. Sutherland, Manager, Technical Services, Nanisivik Mines Limited
Mr. J. Goyman, Manager, Mineral Processing, Nanisivik Mines Limited
Mr. F. Tordon, Geotechnical Consultant
Mr. R. Knappe, Senes Consultants
Mr. J. McConnell, Mine Manager, Nanisivik Mines Limited

Appearances by Indian and Northern Affairs Canada
Mr. W. Puznicki, Regional Coordinator
Mr. B. Collins, Water Resources Division
Mr. P. Smith, Water Resources Inspector

Appearance by Environment Canada
Ms. A. Wilson

Appearance by Fisheries and Oceans Canada
Ms. M. Keast

Appearances by members of the public
Ms. K. Joeseph
Mr. A. Qavavauq
Ms. T. Qavavauq
Mr. M. Akumalik
Ms. L. Uyunga
Mr. P. Muctar

APPENDIX III

WRITTEN SUBMISSIONS AND CORRESPONDENCE

Indian and Northern Affairs Canada. Letter dated May 13, 1997.

Nanisivik Mines Limited. Letter dated May 12, 1997.

Baffin Region Inuit Association (QIA). May 12, 1997.

Indian and Northern Affairs Canada. Letter dated April 30, 1997.

Environment Canada. Letter dated April 29, 1997.

Fisheries and Oceans Canada. Letter dated April 25, 1997.

Nanisivik Mines Limited. Letter dated April 24, 1997.

Baffin Region Inuit Association (QIA). Letter dated April 23, 1997.

Baffin Region Inuit Association (QIA). Letter dated January 28, 1997.

Indian and Northern Affairs Canada. Submission dated September 24, 1996.

Nanisivik Mines Limited. Submission dated September 24, 1996.

Environment Canada and Fisheries and Oceans Canada. Joint submission dated August 30, 1996.

FIGURE 1 - NANISIVIK PROJECT ENVIRONMENTAL IMPACT AREA WITH SNP STATIONS