

**ECHO BAY MINES LTD**

**Lupin Operations**

9818 Edmonton International Airport  
Edmonton, Alberta  
T5J 2T2

**Bill Danyluk**

General Manager  
Telephone: (780) 890-8777  
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May 25, 2001

Nunavut Water Board  
P.O. Box 119  
Gjoa Haven, NT  
X0E 1J0

Attention: Philippe di Pizzo  
Executive Director

Dear Sir:

RE: **Echo Bay Mines Ltd., Lupin Operations**  
**Water Licence Number NWB1LUP0008**  
**Amendment Application – Executive Summary and Translation**

Enclosed is an executive summary for the Lupin water licence amendment application. A translation of the summary into Inuktitut will be forwarded to you once completed. We did want to get this document to you as soon as possible, as there are certain time constraints pertaining to the reclamation security payment to DIAND. Echo Bay is requesting an amendment of General Conditions Part B, Article 2, which presently reads:

The Licensee shall post and maintain a security in the amount of \$29.2 million dollars in the form and schedule as required by the Minister of Indian and Northern Affairs Canada.

Echo Bay contends that **\$15.5 million** more accurately represents a fair and appropriate amount to secure the performance of future reclamation obligations at the Lupin operation.

If you have any questions, comments or require additional information, please contact me at your earliest convenience at (780) 890-8777.

Yours truly,



Bill Danyluk  
General Manager, Lupin Operations

cc Mr. Thomas Kudloo, Chairman, Nunavut Water Board  
Mr. David Milburn, Manager, Water Resources Division, DIAND

**Lupin Mine  
Contwoyto Lake, Nunavut  
Licence NWB1LUP0008  
Amendment Application**

**Executive Summary**

**Echo Bay Mines Ltd. ("EBM")** operates the Lupin mine on the western shore of Contwoyto Lake, Nunavut. The mine has been in production since 1982 and has just recently produced its three millionth ounce of gold. The current Life of Mine Plan forecasts production of approximately 155,000 ounces of gold per year to 2005, with declining production through 2008. Ongoing exploration programs are currently underway which could extend the life of the operation.

In July 2000, EBM was granted a renewal of the Lupin water licence for a period of eight years, to June 30, 2008. Within Part B, General Conditions, article 2, the reclamation security amount was set at \$29.2 million in the form and schedule as required by the Minister of Indian and Northern Affairs Canada. EBM has always contended that the ultimate reclamation amount is substantially less than the figure derived by the Nunavut Water Board (the "NWB"). We have obtained an independent estimate by a consortium of reputable northern consulting and construction companies that confirm our lower reclamation estimate. Combined with the discounts applied to the NWB estimate in recognition of EBM's history of operation and compliant environmental record, we believe the actual security amount should be set at \$15.5 million.

The following points summarize our rationale for recommending that the NWB grant our application to reduce the amount of reclamation security for the Lupin operation:

- EBM has an exemplary record of environmental stewardship at each of its North American operations. EBM has completely reclaimed two mines in the Northwest Territories (the only mining company to have done so) and four others in the United States. Progressive reclamation is practiced at each of the current operations and completed on a timely basis.
- The Lupin operation has already spent over \$5 million on progressive reclamation of the site and further work is planned during each year of operation. EBM continues annually to reduce the reclamation liability at the operation, not add to it.
- EBM fully intends to perform all the work required to reclaim the site once mining is completed. The dollar value set today should not be considered to be set in stone, but is meant to be reviewed annually. If reclamation costs prove to be higher, EBM will still perform the required work. Conversely, if the cost of reclamation, through continued research and operating practice, should prove to be lower, EBM should not be held accountable to spend the originally estimated amount.

- The estimate that formed the basis of the security amount set by NWB in 2000 was based on unreasonable assumptions.
- EBM continues to conduct research with the help of recognized technical experts, who will help determine the most cost effective techniques for reclaiming the tailings containment area and other parts of the operation. Research is being primarily directed to determining whether one metre of cover or less would be adequate to sufficiently slow or prevent oxidation of tailings.

EBM recognizes the responsibility of the NWB in ensuring that the regulation, use and management of water within Nunavut encompass environmental concerns and ultimate site reclamation. EBM also recognizes that it is not the intention of the NWB to place such an economic burden on the operation so as to force it into financial insolvency. We look forward to continuing to work with the NWB as we proceed through this amendment process regarding the amount of the required reclamation security and thereafter with DIAND, to negotiate reasonable and realistic terms for a security payment schedule. By working together, we can ensure that a solution can be reached that is acceptable to all three parties.

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Nunavut Water Board  
P.O. Box 119  
Gjoa Haven, NU  
X0B 1J0

Attn: Mr. Philippe di Pizzo  
Executive Director

**RE: Echo Bay Mines Ltd., Lupin Operations**  
**Water Licence Number NWB1LUP0008**  
**Amendment Application**

Dear Sir:

Please accept this letter as a formal application to the Nunavut Water Board (the "NWB"), to amend Water Licence NWB1LUP0008 issued on July 1, 2000 in respect of the Lupin mine. Specifically, this letter is requesting a review of, and a reduction to, the amount of security that must be posted. A cheque for \$30, payable to the Receiver General, is attached to cover the administration fee.

## **BACKGROUND**

Echo Bay Mines Ltd. ("EBM") obtained an option on the Lupin property in 1979 and carried out exploration, development and other activities, leading to a construction decision in 1980. Commercial production commenced in October 1982. The Lupin mine is located on the west shore of Contwoyto Lake, Nunavut, approximately 285 kilometres southeast of the community of Kugluktuk, 80 kilometres south of the Arctic Circle and 400 kilometres northeast of Yellowknife, Northwest Territories. To date, approximately 3,000,000 ounces of gold have been produced from Lupin. The current Life of Mine Plan forecasts production of approximately 155,000 ounces of gold per year to 2005, with declining production in 2006, 2007 and 2008.

EBM obtained the first water licence for the Lupin mine from the Northwest Territories Water Board on June 1, 1981. The licence was subsequently renewed pursuant to the *Northwest Territories Waters Act* and Regulations in 1990 and again in 1995, with an expiry date of May 31, 2000.

Over the course of these licence terms and the existence of the Lupin mine, EBM has operated in a manner that has been both beneficial to the Company and to the overall development of the North. In addition to providing much needed employment and revenue through its operations, the Lupin mine has been relied upon as an additional "gateway to the north", providing a staging location for both exploration and government services. The infrastructure provided by the Lupin operation is important to future growth and development in Nunavut as well as the neighbouring Northwest Territories. During peak exploration in the mid 1990's, the Lupin Weather Station/air traffic control recorded in excess of 2,500 landings annually for a variety of exploration companies. To this day, Lupin continues to provide services in the exploration field for private enterprise (DeBeers, Hope Bay JV, Ashton and BHP, to name a few) and to various Federal and Territorial Government Departments.

In addition to providing these on-site services and enhancing development potential, EBM has been directly involved with two major mine reclamation projects in the north. The silver mine at Port Radium was closed down in 1982 and EBM completed reclamation and closure work by the end of 1984. EBM also provided salvage and reclamation services to Cominco Ltd. at Pine Point in 1988. In the United States, EBM has restored four mine sites: the Manhattan and Borealis mines in Nevada, the Sunnyside Mine in Colorado, and the Alaska Juneau Mine in Alaska. Borealis and Alaska Juneau have been completed, while post-closure monitoring will continue at Sunnyside and Manhattan.

EBM's continuing commitment to reclamation goes beyond the work being carried out at Lupin (see attached summary) as we are actively involved in ongoing reclamation activities at the Company's three operating mines in the United States (Kettle River, WA; McCoy Cove, NV and Round Mountain, NV).

In regard to operations at Lupin, EBM has implemented numerous programs to improve the treatment of mill tailings and limit or reduce the overall impact to the receiving environment. One of these programs, the paste backfill system, was implemented in 1995 at a significant capital cost in an effort to provide ground stability underground and improve mining practices. An added benefit to this program has been the reduction of tailings solids being sent to the tailings containment area (the "TCA"). Most recently, we have initiated plans to utilize additional space underground (the upper mined out stopes) to place paste backfill material when not required to support the mine plan. This will ensure that the amount of tailings solids sent to the TCA is minimized and current storage capacity is not unnecessarily used.

Effective management of the tailing disposal system at Lupin has demonstrated that the water within the TCA can sometimes be held for an additional season and therefore only requires discharge every second year. Again this year, we plan to hold process water for an additional year and forgo discharge of effluent until 2002. In addition to allowing for further natural conditioning of the water, this option will provide a season without disturbance to the receiving stream.

In July 1999, EBM applied to the NWB for a renewal of the Lupin water licence. The project was screened by the Nunavut Impact Review Board, which determined that the project proposal could be processed without a review under Part 5 or 6 of Article 12 of the Nunavut Land Claims Agreement. The NWB decided to hold public hearings before approving the renewal application and set a hearing date for March 28 and 29, 2000 in Kugluktuk. Pre-hearing meetings to inform the public of the project and the process were held in January 2000 in the communities of Umingmaktok, Bathurst Inlet, Kugluktuk and Cambridge Bay.

Upon review of the written and oral submission presented to the board, the NWB granted EBM a water licence for a term of eight years. Several conditions were attached to the licence, including a requirement for reclamation security in an amount of \$29.2 million. This amount was derived firstly by reducing the reclamation liability estimate submitted to the NWB by Brodie Consulting Ltd. ("BCL") from \$44.6 million to \$36.6 million, based on evidence submitted by EBM. A further reduction of 10 percent was made, "based on EBM's compliance record and history of good competent behaviour" and a reduction of 10 percent also made because "Lupin is an existing mine that has been in operation for almost 20 years."

In its decision, the NWB gave notice that the reclamation security issue is to be reviewed annually, with the possibility of adjusting the security amount as new evidence or circumstances arise.

#### **REVISED ESTIMATE OF LUPIN'S RECLAMATION LIABILITY**

Following the NWB's decision, EBM sought another independent assessment of the current reclamation liability. Nuna Logistics Ltd. ("Nuna") was invited to investigate Lupin's reclamation liability and submit a project proposal to carry out final reclamation activities. Representatives from Nuna, Clark Builders, and EBA Engineering Consultants Ltd. ("EBA") conducted on-site inspections of the Lupin mine to view first hand the actual and potential liabilities. On January 19, 2001 Nuna, in conjunction with Clark Builders and EBA, submitted a proposal and cost estimate for reclamation of the Lupin site. A copy of the proposal, titled *Proposal and Cost Estimate for Echo Bay Mines Ltd. Lupin Mine Site Reclamation* was sent to the NWB on May 11, 2001. Their total cost estimate, excluding contingency, is \$24,598,800.

For the record, it is to be acknowledged that an earlier estimate had been prepared by Golder Associates Ltd. ("GAL"). In 1997, EBM contracted GAL to conduct a closure cost estimate for the Lupin mine. Representatives from GAL and PCL Constructors Northern Inc. visited the Lupin site to observe the mine conditions and facilities. In December 1997 GAL submitted a report titled *Closure Cost Estimate and Scoping of Mine Closure Issues, Lupin Mine, NWT*, a copy of which is on file with the NWB. GAL estimated Lupin's closure costs to be \$29,346,000.

One should note that both the Nuna and GAL estimates were carried out with the benefit of on-site activity, whereas the one prepared by BCL in March 2000 had neither the benefit of a visit to the Lupin site nor interviews with anyone associated with the operation. BCL simply estimated the reclamation liability to be \$44.6 million. This estimate is 81 percent higher than the Nuna estimate and 52 percent higher than the one prepared by GAL.

## **ALTERNATE TECHNOLOGIES FOR CONTROLLING ACID ROCK DRAINAGE**

### **Esker Cover Option**

All of the independent cost estimates noted above are based on the assumption that acid rock drainage ("ARD") in the tailings containment area will be controlled by keeping the acid generating tailings in a permanently frozen state, by covering the tailings with a 1.75 metre (EBA and BCL) to two metre (GAL) layer of esker material. While this concept is still being studied to determine if it is technically sound and economic, it is not the only closure option available and others are being investigated. EBM believes that a closure cost estimate based on 1.75 metres of cover represents the extreme upper end of the spectrum for potential reclamation cost. Research is being directed to determining whether one metre of cover or less would be adequate to sufficiently slow or prevent oxidation of tailings, whether or not the tailings remain frozen.

The assumption that 1.75 metres of esker cover is needed to maintain the tailings in a permanently frozen state needs to be challenged since the actual depth of required cover has not yet been determined. Recent thermistor data taken from the esker covered areas of Lupin's tailings indicates that the active layer is less than 1.75 metres.

Alternatively, other options are being considered that may significantly reduce the amount of esker or alternate material required for cover while at the same time providing the same insulating benefit to keeping the tailings frozen. There is a preliminary indication that with the introduction of a 15 centimetre ice lens between the tailings and the esker material, the depth of esker needed might be reduced to approximately one metre. This would result in significantly lower closure costs, as shown in Table 2 below.

Another option (to the stand-alone 1.75 metres of esker cover) that is being considered is the use of a coarse rock layer between the tailings and the esker cover. This initial layer is expected to provide an insulating air layer, significantly reducing the amount of insulating esker cover required. The air space provided would act in a manner similar to an engineered 'thermosyphon' and retain the cold air mass, which would in turn maintain the cold temperature of the tailings and cover material throughout the warmer spring and summer months.

These are but two of the potential alternatives to a closure method that was originally proposed over ten years ago as a means of containing the solid tailings and possibly allowing the natural permafrost to move in. A research program is currently being

developed in affiliation with the University of Alberta to evaluate the various methods available to prevent acid generation in the TCA. The ultimate aim of the exercise is to develop the most effective technique to prevent oxidation of the tailings deposited within the containment area. It is apparent that there are a number of potential alternatives to investigate before a definitive best solution is selected.

The most recent estimate of Lupin's reclamation liability, prepared by Nuna, placed the cost at \$24,598,800. Adding other costs not in the scope of that estimate brings the total to \$25,093,000, as shown in the following table:

**Table 1: Nuna Logistics Ltd. Reclamation Cost Estimate**

Based on 1.75 metres of esker cover on tailings

Estimated cost per proposal (rounded)	\$24,599,000
Add:	
Post-closure monitoring*	125,000
Engineering* 1.5%	<u>369,000</u>
<b>TOTAL</b>	<b>\$25,093,000</b>

\*Amount or rate as proposed by BCL in March 2000 hearings.

Table 2 below shows the estimated change in the reclamation cost, depending on esker cover thickness, based on the costs submitted by Nuna.

**Table 2:**

<u>Cover Thickness</u>	<u>Tailings Portion (\$000)</u>	<u>Total (\$000)</u>
1.75	13,440	25,093
1.60	12,288	23,941
1.40	10,752	22,405
1.20	9,216	20,869
<b>1.00</b>	<b>7,680</b>	<b>19,333</b>
0.80	6,144	17,797

If, as anticipated, the results of test work and/or the introduction of an ice lens (or other alternative method) proves effective in reducing the required esker cover to a conservative one metre, then the reclamation costs based on Nuna's estimate would be reduced to \$19,333,000. Applying the same discount rates as the NWB used in determining the original security amount (10 percent + 10 percent), the revised reclamation security amount would be **\$15.5 million**.



## Self-Sustained Water Cover Option

An alternate (proven) closure option to prevent acid generation in the tailings that is being investigated is the self-sustained water cover option. This technology involves providing a water cover over the entire tailings deposit by constructing internal dykes and perimeter dams. According to a Mine Environment Neutral Drainage ("MEND") report, field and laboratory test results have proven that water can be used as an effective oxidation barrier. An added benefit to the water cover option in the far north is the lower average annual temperature that would be present in comparison to the work done in more southern climates.

During the period 1991-1994, Waterloo University conducted evaporation studies within the Lupin tailings containment area. These studies indicated that there is a net gain in precipitation on a yearly basis, indicating that water is a suitable cover option. The 1997 GAL report on closure costs contemplated the water cover option and determined that it was indeed viable.

The GAL study indicates that 1.29 million m<sup>3</sup> of esker material would be needed to increase the size of the perimeter dams to allow the tailings to be permanently covered with water. This amount of material is 61 percent of the quantity required for a 1.75 metre depth of tailings cover. Using Nuna's reclamation cost estimate of \$13.4 million for the tailings cover and reducing it proportionately for the reduced material required for the water cover option results in a revised cost estimate of \$8.2 million for remediation of the TCA and a total reclamation cost of \$19.9 million. Again, applying the same discount rates as the NWB used in determining the security amount, the revised reclamation security amount would be **\$15.9 million**. Although the water cover option appears economically attractive, at this time it is not our preferred option because of the ongoing monitoring that would be required.

## CONCLUSION

EBM believes that the basis for the reclamation security amount should represent the lowest cost, and most technically viable method. As shown above, EBM is investigating alternative options that significantly reduce the overall reclamation costs. While the ice lens option and coarse rock cover require further study, the self-sustaining water cover option is proven technology at a cost lower than the esker cover option. The water cover option is a perfectly acceptable solution that meets all legal and regulatory requirements. EBM will continue to pursue alternative cover options with the goal of demonstrating acceptable performance at still lower cost.

In light of the reclamation cost estimate provided by the Nuna/Clark/EBA consortium and the viability of the water cover option, it is clear to EBM that the ultimate reclamation obligation is substantially less than the \$29.2 million in security that is currently required.

The sudden imposition of a 20 or 30-fold increase in security requirements, compared to the previous security requirement of \$1.0 million, for conditions that have long existed will have the effect of creating financial havoc for EBM or any other entity faced with like circumstances. This enormous increase in the security is inconsistent with DIAND's discussion paper titled *Toward a Mine Site Reclamation Policy for the Northwest Territories*, which reads:

While DIAND does not intend to force existing mines into financial insolvency through the imposition of this Policy, it is not acceptable to allow outstanding liabilities to continue to grow.

EBM has consistently and diligently applied a strategy of progressive reclamation. Even during the temporary suspension of operations at the Lupin site, from January 1998 to December 1999, EBM continued with progressive reclamation. Our reclamation liabilities continue to decrease, not increase (please see attached summary). In preparing its decision, the NWB aptly quoted the following from DIAND's *Consultation Document on Mine Reclamation Policy for the Northwest Territories*:

The reclamation measures required of existing producing mines would need to recognize the economic status of these operations, including the remaining mine life. Reclamation would have to be evaluated on a case-by case basis, taking into account the specific situation of the operation, the potential environmental impacts and the constraints imposed by other legislation.

Any additional financial assurance required from existing producing mines would take into account the financial capacity of the mining company to provide the additional financial assurance, as well as the magnitude of risks posed by the operation.

EBM respectfully requests the NWB to consider the information provided and review the amount of security that must be posted. EBM further requests that an oral hearing be scheduled so the information presented here may be reviewed openly with the Board, interested parties and the public generally.

We also believe it important for the NWB to ask that DIAND, pending further determinations by the NWB, take no further action in respect of security requirements for Lupin.

Sincerely,



Bill Danyluk

General Manager, Lupin Operation

Cc Mr. Thomas Kudloo, Chairman, Nunavut Water Board  
Mr. David Milburn, Manager, Water Resources Division, DIAND

## ATTACHMENT - I

### ABANDONMENT AND RESTORATION ACTIVITIES

To date, EBM has documented spending approximately \$5.4 million on progressive reclamation of the Lupin mine site. Also, an additional amount of reclamation related work was carried out for which the spending credit has not been documented. Following are some of the reclamation activities that have been carried out.

1979

Cleaned up the original exploration site as left by Inco Ltd. after the property was purchased by EBM.

1982-83

Cleaned up the original construction site upon completion of the original construction phase.

1982; 1985; 1990

Installation of thermistors for ground temperature monitoring in Dams 2, 1a, 1b, 1c, Dam 3d, K Dam, J Dam and Cell 1a.

1987-88

Esker material was transported from the Fingers Lake Esker and used to cover Cell 1a to a nominal thickness. Organic material was transported to Cell 1a for re-vegetation studies.

1994

Started cleanup/reclamation of spill area from the Tailings spill that occurred in 1987 along the tailings line adjacent to the sewage treatment ponds. Tailings material and surface soils were stripped and removed to the TCA. Esker material was transported from the Fingers Lake Esker to return the area back to original grade.

Initial construction of test cover plots in Cell No.1 began in the spring of 1994. This was preceded by a geomagnetic survey of Cells No.1 and 2 to determine the current thaw depth and any anomalies that might be present. Final construction of the test cells was planned for 1995 (abandoned to proceed with full covering of the cells).

## 1995

Final reclamation work was done at the 1987 spill location. Approximately 252 m<sup>3</sup> of remaining material was removed with approximately 16,000 m<sup>3</sup> of esker type material placed in the area to infill and provide protection against the affects of spring run-off (erosion).

Extensive covering of Cell No.1 with esker material excavated from the Fingers Lake Esker. An approximate 1.2 metre depth of esker cover was achieved. Cell No.1a at the northern corner of Cell No.1 received an additional layer of esker material, bringing the total depth to approximately 1.5 metres. Approximately 30% of Cell No.2 was covered in the same manner.

Installation of ten new thermistors took place in October 1995. These were placed in Cells 1 and 2 as well as Dam4. The strings installed within the cells were manufactured with temperature tip spacing of every 0.25m in the first three meters.

During October and November, approximately 75,000 m<sup>3</sup> of quarry rock from the Occurrence 8 quarry pit was placed on the downstream slope of Dam 3d. This was used to provide additional stability as well as erosion protection at the dam/water interface.

## 1996

Gathered temperature data from thermistors installed in late 1995 in Dam 4 and TCA Cells No.1 and 2. Received a report on the installation of new thermistors in 1995.

Removal of unused steel clad building (777 shop) from the site. The building was approximately 85'x140' with a gravel floor. The graded foundation is to be excavated and placed in the open crown pillar (within permafrost).

Placement of 74,000 m<sup>3</sup> of tailings solids in the Lupin underground workings in the form of paste backfill, thereby reducing the amount of material deposited at the TCA.

Created several "topsoil islands" on the esker cover of Cell No.1, each with an area of approximately 500 m<sup>2</sup>. This topsoil was relocated from a new excavation area of the Fingers Lake Esker.

Transplanted approximately 200 shrubs from the Cell 4 area of the TCA to the esker cover area of Cell No.1 and the "1987 spill" reclaimed area.

1997

Continued to gather temperature data from thermistors installed in 1995 in Dam 4 and TCA Cells No.1 and 2. Received in February 1997 a report entitled "1996 Annual Thermistor Report; Cells No.1 and 2 and Dam 4; Lupin Mine N.W.T."

Reclaimed approximately 57,000 m<sup>2</sup> of TCA Cell No.2 by covering with esker material obtained from the Fingers Lake Esker. Total amount of fill place was approximately 80,000 m<sup>3</sup> (to nominal 1 m depth).

Upgrade to M Dam preventing contact of Pond No.2 water with oxidized tailings material and controlling run-off from entering the pond. The dyke extension was approximately 530 metres in length.

Cell No.3 overburden (till) was scraped and stockpiled from within the southern boundary of the cell for future reclamation use in covering tailings material within this cell. An estimated 15,000 m<sup>3</sup> of material was moved.

Approximately 1,500 metres of roadway was taken out of service through removal of access points and scarifying the surface to promote natural re-vegetation.

Excavated pad material from the location of steel clad building (777 shop) and placed material in the open crown pillar on surface.

Consultant contracted to carry out a closure cost estimate study. A report prepared entitled "Closure cost Estimates and Scoping of Mine Closure Issues, Lupin Mine, NWT."; January 1998.

Placement of 71,000 m<sup>3</sup> of tailings solids in Lupin's underground workings in the form of paste backfill reducing the amount of potentially acid generating material that would normally report to the tailings containment area.

1998

Continued to gather temperature data from the thermistors installed in Dam4 and Cells No.1 and 2.

A considerable amount of scrap steel (framework, grid flooring, support beam, etc.) and old piping from the TCA was disposed of within the East Zone crown pillar opening prior to backfilling.

Filling in of the East Zone crown pillar with oversized waste rock and underground rock from various sources (waste rock pile, 777 truck shop foundation, nearby access roads being taken out of use and fill used for the grading of the ball field). Overburden

previously stockpiled from prior to crown pillar mining was pushed back over the site and re-graded.

Reclamation was carried out on the original Twin Otter air strip located to the south of the Sewage Lakes and accessed from the tailings line road. All remaining equipment (bone yard materials – old water tanker, containerized parts storage, mill shell, flatdeck trailer, etc.) had been removed and the area used as roadway was loosened using a grader equipped with a rear-ripper to scarify the ground. The access bridge from the roadway over the tailings line was also removed to prevent further travel in the area.

A fuel tank located at the airstrip (used prior to winter road fuel supply-early '80s) was removed along with the associated piping.

A number of old storage buildings located near the float plane dock at the pumphouse were removed to the lay down area for planned use in firefighter training.

Checked the natural thaw depth at the Fingers Lake Esker (1.32m) for comparison with the temperature data obtained at Cells No.1 and 2.

#### 1999

Activities during 1999 included general site clean-up at both the mine and TCA. Temperature monitoring of thermistor locations at the TCA continued throughout 1999 with focus on Dam 4 and Cells No.1 and 2.

#### 2000

Collection of temperature data from numerous locations throughout the TCA, specifically Dam 4, Cell No.1 and Cell No.2.

Elevation of J Dam and M Dam, at a cost of \$646,000, which has provided sufficient tailings storage capacity for the Lupin life of mine, thus removing the need to use Cell 4 for tailings disposal.

Construction of an internal dyke in Cell 3, at a cost of \$94,000, to partition the cell and allow for progressive reclamation as the partitioned sections are filled to capacity.

Construction of a 1.5 metre thick layer of esker material on Cell 1 to test the active layer of permafrost.

Placement of 67,000 m<sup>3</sup> of tailings solids in Lupin's underground workings in the form of paste backfill reducing the amount of potentially acid generating material that would normally report to the tailings containment area.

November 2000

2000 Thermistor Installation Program – Installation of replacement thermistors within TCA Dams 1a and 2, Fingers Lake Esker; the installation of thermistors into M Dam and covered tailings Cell No.1 was postponed due to poor ground drilling conditions.

#### **PLANNED ABANDONMENT AND RESTORATION ACTIVITIES – 2001**

The following are planned activities for 2001 with regard to ongoing reclamation practices. The tailings line and trailer removal were given budget approval just recently this year.

Removal of the original six-inch diameter tailings line from the Lupin Mill through to the Tailings Containment Area (approximately 6 km). The direct cost to complete this task is estimated in the GAL report to be \$146,000.

Removal of the "Redpath" and A&B accommodation trailers. These units have been offered to contractors however, if not spoken for will be removed from service and burned as a training lesson for the emergency response team. The footprint of these buildings is approximately 1,500 m<sup>2</sup>.

Reduce the footprint of the mine site by consolidating storage and removal or re-grading of pad material.

**ECHO BAY MINES LTD**

**Lupin Operations**

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**Bill Danyluk**

General Manager

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May 25, 2001

Indian and Northern Affairs Canada  
Water Resources Division  
Box 1500  
Yellowknife, NT  
X1A 2R3

Attention: David Milburn  
Manager

Dear Mr. Milburn:

**RE: Security Deposits for Echo Bay Mines Water Licences**  
**Lupin Mine (NWB1LUP0008) and Ulu Mine (NWB2ULU9700)**

This letter is in reply to your letter dated April 30, 2001 and the matter of scheduling the payment of reclamation security for the Lupin mine. Echo Bay Mines Ltd. ("EBM") recognises DIAND's need to protect the interest of the Crown, but believe it is important for DIAND to acknowledge what has been stated by the Nunavut Water Board ("NWB") in respect of instalment payments. At page 31 of the decision in the subject license matter, the NWB clearly states that, "...the Board does believe the security should be paid in instalments so that the security expenditures can somewhat be synchronized with the operations of the mine. The Board asks DIAND to reach agreement with EBM on the instalment schedule."

For EBM, the above quoted language should mean precisely what it says, namely, that we must reach consensus as to what is required. We believe EBM has at all times attempted to act in a way that meets the needs of the public interest, as well as those of its shareholders. We would like to continue to do so and it is our intention that this be accomplished on an ongoing, collaborative basis.

For your information, we are enclosing a copy of the application just filed by EBM with the NWB, seeking an amendment to the subject license. Of particular relevance are two statements quoted (see page 7 of the formal application for amendment) which enunciate government policy in a way that attempts to balance public and private interests. We

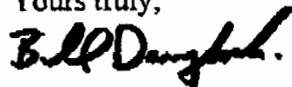


applaud the Government of Canada for adopting this policy and we believe it entirely consistent with the language quoted from page 31 of the NWB decision.

We wish to continue to work with DIAND to reach a timely resolution regarding the amount and schedule for posting security. We ask that you defer any further action pending such additional determinations as may be made by the NWB.

If you have any questions, comments or require additional information, please contact me at your earliest convenience at (780) 890-8777.

Yours truly,



Bill Danyluk  
General Manager  
Lupin Operations

cc Mr. Thomas Kudloo, Chairman, Nunavut Water Board  
Mr. Philippe di Pizzo, Executive Director, Nunavut Water Board